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PAPER TRADE JOURNAL

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PAPER TRADE JOURNAL
ESTABLISHED 1872
THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD
FIFTY-THIRD YEAR
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PAPER TRADE JOURNAL

With Which Is Combined

PAPER

Vol. LXXXI, No. 12 — Thursday, September 17, 1925

The Magazine of the Paper Industry

Northwest Paper Co. Starts New Paper Machine

New 96-inch Fourdrinier at Cloquet Plant Makes Paper Commercially For the First Time Tuesday of Last Week—Machine Was Ordered Last February and Was Installed in Record Time—Will Bring Capacity at Cloquet of Book and Writing Up to 45 Tons Daily

CLOQUET, Minn., September 14, 1925.—Tuesday morning of last week the new No. 3 paper machine at the Cloquet plant of the Northwest Paper Company turned over for the first time, on a commercial product.

This machine, which is a Beloit 96-inch Fourdrinier, equipped with a Voith slice and Millspaugh suction couch, was ordered last February, and installed in record time.

The machine is housed in a new building constructed with the engineering assistance of the firm of Jacobson Engineering Company, of Minneapolis.

The motive power for the machine is supplied by a Chandler & Taylor variable speed engine, with a speed from 100 to 600 feet per minute.

The new installation includes three Noble & Wood 1500-lb. beaters, which have been placed in a reconstructed building in the rear of the present beater room.

The capacity of this new machine will be in the neighborhood of 20 tons per day, bringing the total production at Clouqet, of book and writing papers, to 45 tons per day, in addition to the 25 tons of Arrowhead envelope and Fortress Pongee, bag, wrapping, and converter paper made on the No. 1 machine.

The No. 3 machine will be used to supply the fast growing demand for Klo-Kay English finish book and Klo-Kay white writing papers, which the company has been producing since the first of the year on the No. 2 machine.

In addition to the 70 tons of paper produced at Cloquet, the Northwest Paper Company operates a 45-ton news print mill at Brainerd, Minn., and is equipped with a 60-ton bleached and unbleached sulphite mill, a 60-ton soda mill, and a 60-ton groundwood mill.

Daily Newspaper Corp. Expanding

NORTH TONAWANDA, N. Y., September 14, 1925.—The plant of the Daily News Paper Corporation on Tonawanda Island, which supplies print paper to the Chicago *Tribune*, the New York *Daily News* and the *Liberty* magazine is expanding rapidly, says the North Tonawanda *News*.

Ever since the mill was placed in operation about a year ago, additions have been constructed until now the entire lower end of Tonawanda Island is occupied. The plant is about to have installed another paper making machine, which will double its capacity.

Forecast has been made that within a few years the industry will have expanded until it occupies a large part of the island. It has frequently been rumored, in connection with the paper mill's operations, that some day, not far distant, the plant of the *Liberty* magazine will be brought here and located on Tonawanda Island, so as to be near its source of paper supply. The *Liberty* plant is at present located in New York.

The paper mill today is rated as a million dollar industry. Expansions that are expected will increase its valuation to many times its present figure.

Great piles of pulp wood on Tonawanda Island are mute evidence of the large industrial institution which the paper mill is. Besides having a large quantity of pulp stored at the foot of Tonawanda Island, stores of pulp also cover the site of the former lumber yard of Smith, Fassett and Company.

In order to protect its pulp on the lower end of the island from fire, the paper company has purchased a pumper, abandoned by the Buffalo fire department, and housed it on the river front near the pulp wood pile.

In its present location at the foot of the island, the pulp wood would be difficult for the North Tonawanda fire department to reach promptly with its pumpers and other apparatus. The company's pumper, besides extinguishing small blazes, would materially help to hold serious fires in check until the city firemen arrived.

Tenders for New Mill in Manitoba

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., September 14, 1925.—Tenders will shortly be called in connection with the new pulp mill to be erected by the Manitoba Pulp and Paper Co. at Fort Alexander, Man. Excavation work on the site has been practically completed but new plans for the mill have been required owing to the fact that foundation tests on the proposed site have necessitated a new location. In the meantime, however, the camp buildings have all been completed. The branch line connecting the Grand Beach line of the C. N. R. and Fort Alexander on Lake Winnipeg is being graded and excellent progress is being made with this work. The company subsequently expect active construction work to commence this fall.

Brownville Paper Co. Closed for Repairs

[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y., September 14, 1925.—The mills of the Brownville Paper Company are shut down for the present while extensive repairs and improvements to the machinery are being made. Two machines are down at present but one of these will be placed in operation again in a week or so. The other machine will have several new improvements installed which will increase its speed and efficiency. This will be running again before the end of the month.

Philadelphia Mills Operating at Greater Capacity

Demand for Glassines, Box Boards, High Grade Krafts and Other Keystone State Products Broadens—Dealers Discuss Future Prospects for Coarse Paper Business—More Stringent Packing, Sorting and Grading Advocated by Wholesale Rag Dealers

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., September 14, 1925.—There was a continuance of the dull business trend which set in during the first days of September with the holiday week just closed. It may be that the absence from the city of many business heads, executives and employees, in a belated vacation, had much to do with the extremely dull markets for paper that prevailed. Many trade associates also remained over at the resorts for the Labor Day holiday and for that reason not much business was effected in the way of large deals. Most of the actual orders were for small hand to mouth supplies to meet the moment's need and were not of an impressive character. Despite the present prevailing dullness numerous inquiries and requests for samples and prices are coming in the offices of the paper dealers in both branches of the distribution industry.

Local Mills More Active

The mill orders in the local territory are sufficient to keep operation at capacity in the larger manufacturing plants and, in some of the more prominent mills, enough business has already been booked to maintain the present working schedule for several weeks to come. Of course, the mills hereabouts had but very little stocks on hand and the present activity does not warrant belief that there is a boom in the demand for paper. It does, however, indicate that the markets for glassines, box boards, high grade Krafts and other Pennsylvania and adjacent State products, show a steadier tendency and a broadening demand for the Fall requirements. Mills manufacturing book and coated papers, bonds, and other writings too, have been operating on an increased scale and now are running at about 85 per cent, with a few of the book paper manufacturers enjoying a full time schedule of operation.

Paper Stocks Show Little Activity

While the paper distributors are quietly waiting for the passing of the present dullness, the stock dealers, too, are taking a waiting attitude. A few of the commoner grades of paper stock are being purchased in large quantities but most of the grades are inactive. Stocks in the warehouses continue to show the sparsity of offerings in waste paper and the warehouses are practically empty of all the needed materials now in demand by the mills.

Paper Expert For Duponts

In order to furnish the paper manufacturers with an expert service in the use of colors, as applied to paper making, the Dupont Company, of Wilmington, Del., has added to the Philadelphia offices a chemical adviser thoroughly acquainted with the industry. He is J. Carl Smith, formerly chemist at the Wilmington works of the Dupont Co., and previously associated with the Hammermill Paper Company, of Erie. The duties of the Paper Chemist Expert will be to accompany the salesmen on their travels through the mills in Pennsylvania, Delaware, West Virginia, Maryland, and Southern New Jersey, and to assist the mill owners and superintendents in the selections of colors and other chemicals used in the manufacture and coating of papers, giving them helpful advice on the matter of colors and coatings in relation to paper making. He will continue to keep in touch with the mills in an advisory capacity, rendering them any aid that they may require in this way.

This is the first time that a chemist expert has been assigned to the Quaker City office under the management of Clarence C. W. Wilson, who for 9 years has been in charge of the Philadelphia Branch at 126-128 South Front street. Heretofore, the Chemical Service has been confined to the main factory in Wilmington and it is but recently that the Field Expert has been operating in the territory under the branch offices.

Wholesale Rag Dealers Meet

Though the wholesale rag dealers comprising the Rag Division of the Philadelphia Wholesale Waste Merchants Association met in the offices of the Penn Paper and Stock Company, of which Secretary William J. McGarity is head, there was no business of importance transacted, due to the absence of the majority of members. The late vacation season kept most of the members away, and so it was decided to postpone the matter of rag sorting and grading on a higher standard to meet the mill requirements, until after the middle of September. This special meeting was called for Tuesday, as agreed upon at the first of the fall meetings of the Wholesale Waste Merchants Association, held in the previous week, when a special session was deemed necessary for the adoption of more stringent packing, sorting and grading of the rags in order to place Philadelphia rag markets on a parity with those receiving extensive mill patronage and whose standards were maintained with mill requirements. Several new ideas have been forwarded and these will be discussed and perfected for practical application when the late September days are at hand.

Osburn Paper Co. Assets Sold

Disposition of the assets of the recently bankrupt Osburn Paper Company, formerly occupying offices in the Bourse Building, was made through auction sale conducted under the Receivers at the warehouse rooms of Samuel Freeman, 18th and Chestnut streets. The total liabilities were $48,826, while the assets were appraised at approximately $27,527, most of which were confined to paper in warehouses, book accounts and furnishings. The sale was held last week when bidders took advantage of the opportunity to buy the stocks of fine paper stored in the warehouses at 19 South 7th street and 1621 Bainbridge street at the low prices of the auction. It is estimated that the Osburn Company, of which Robert Cecil Osburn, was head, will be able to pay its creditors about 50 per cent of its indebtedness as the result of the sale and through collection of the outstanding accounts. Among the creditors were the Southworth Paper Company, Dells Paper & Pulp Co., Price and Pierce streets, and numerous local paper dealers, with smaller accounts.

Referee Sells Selvig Paper Co. Assets

Thomas Gaskill, Referee in the bankruptcy proceedings against the Selvig Paper Company, of Erie avenue, Camden, N. J., following a meeting with the creditors of the firm, decided to accept the offer of $1000 which was made for the assets of the company, consisting of paper stock, office and warehouse fixtures. With the purchase of the assets the business has been disbanded, and the amount applied towards settlement of claims against the firm.

Irwin M. Furlong Tours Mills

For the purpose of perfecting himself in the practical side of paper making, Irwin M. Furlong, recently having joined his father, Thomas F. Furlong, as an associate in the paper distribution firm of the Wilcox, Walter, Furlong Company, of 17 South 6th street, made a tour of various mills in the Eastern States with which the company deals and including the Martin Cantine Company, manufacturers of coated papers at Saugerties, N. Y. He was accompanied of Charles Fheble, head of the Advertising Department and sales promotor for the company, who coached him with the aid

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of the mills' authorities, in the various branches of paper manufacture. Young Furlong is also equipping himself with first hand knowledge of paper salesmanship through practical experience on the staff of the company, having recently become associated with the concern, and will learn the paper business from the group up to the executive end of the trade.

Japan Paper Co. Shows New Importations

New importations of French papers are being shown at the local display rooms of the Japan Paper Company, in the Witherspoon Building, under Manager Warwick C. Miller, and include several assortments of papers adapted for papeterie manufacturers engravers and stationers, direct from mills in France. The papers are in a variety of colors and white in bulk quantities or quire lots, and include such grades as the Old Venzia, Heraldic, Mines, Montfort, Senlis, Les Mignonette, Dauphin, Belvue and Beaumont. These importations have just been received and with them there is displayed the line of French Marble Papers, in marble, crocodile and Borneo designs, to be used in the manufacture of portfolios and other like products.

Coarse Papers Discussed by Dealers

The prevailing condition in the coarse paper market was the topic of interest to the coarse paper dealers who met at the Bourse last Thursday in the first of the regular fall series of sessions of the Coarse Paper Division of the Philadelphia Paper Trade Association. Owing to the absence of many of the members on a belated or prolonged vacation, the few who gathered around the dining table turned their attention to the all important question of what is in store for the industry as the fall days loom, rather than the transaction of routine business matters requiring a full quota action of the membership.

While most of the members agreed that the summer months were not as active as could be desired, they were fairly satisfactory and showed a decided improvement over those of 1924. In the forward outlook for the coarse paper business much optimism was displayed and the dealers are confident that when present inquiries and scouting for prices materialize in actual orders, that there will be a very greatly improved market for all the grades of coarse specialties used in the larger manufacturing industries and mercantile houses. Those who attended were Secretary Joseph Miller, of the Paper Trade Association, and representing the Garrett-Buchanan Company; Harvey E. Platt, of the J. L. N. Smythe Company; James McCracken, of Riegel & Co.; W. W. Seary, of the D. L. Ward Company; and L. A. Peck, of the Paper House of Pennsylvania. The Chairman of the meeting was Charles A. Wilder, representing Wilder Brothers.

Paper Men Attend Conventions

Two important conventions to be held during the coming week will occupy the attention of Quaker City representatives at Springfield, Mass., where the Linweave manufacturers will foregather, and at Poland Springs, where the S. D. Warren Company meets in annual session. George W. Ward, accompanied by W. H. Hentz, left late this week for the Linweave convention and will attend the two day business meetings on Monday and Tuesday and then, with Thomas J. Curry, District Sales Manager of the D. L. Ward Company, and Vice President W. W. Seary, will continue north to Poland Springs to the S. D. Warren gathering.

Another Philadelphia distributor of the Linweave Line, the Raymond & McNutt Company, of Sheridan Building, will be represented at the convention in Springfield by M. K. Christine, its Sales Manager.

President Leon Beck, of the Charles Beck Paper Company, of 609 Chestnut street, will leave this week for the S. D. Warren convention in Poland Springs, representing his firm, a Philadelphia distributor of the Warren products.

News Notes of the Trade

S. S. Garret, head of the firm bearing his name, at 259 South 3rd street, has again returned to his desk after a two weeks' outing with his son, Sylvester S., Jr., on the Delaware Bay, spent in piscatorial pursuits, and a record of 47 varieties of fish to their catch.

Allen E. Whiting is expected to return the latter part of this month from the New England States to his desk at the Whiting-Patterson Company, 320 North 13th street.

Another returning vacationist is Charles A, Wilder, of Wilder Brothers, 12th and Brown streets, who has been sojourning at the Queen of Seashore Resorts.

Harvey E. Platt, treasurer of the J. L. N. Smythe Company, 6th above Chestnut street, is back in headquarters here after a month's outing in the Poconos.

News of the Boston Trade

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., September 12, 1925.—Starting the week off with a holiday and experiencing three days of extremely hot weather, Boston's paper trade did not hit its normal stride until the last three days of the week. On the whole, however, trade activity was better than it has been for some time and the last two weeks has seen a slow but steady climb back to improved conditions. Still there is a tendency to hold off in some quarters which old-timers say is preventing the real business that Boston should enjoy at this time of the year.

Prices are holding in all grades, but in the Kraft and general wrapping paper lines there is noticeable a serious price-cutting period that is disturbing the "conservatives" who say that this practice helps no particular individual and reflects upon the trade in general.

The waste paper houses and raw stock dealers are not any too optimistic over their present business, some admitting it to be the poorest summer they have experienced in years. Some mills are reported as buying stock gradually from several sources. Mill men when asked why they are not in the market, buying heavily, reply very mildly—"Why should we? When the business is in sight and we need the stock then will be time enough." These men are waiting for sufficient business to warrant loading up their stock rooms. That's the simple answer given by the mills.

News and chip board users had rather a quiet week, their customers using board which carried the old price, not dipping into the new stock which was purchased at the new prices. The paper box houses, on the other hand, enjoyed a little "spurt" for a few days when activity was renewed in the shoe trade. There came a steady demand for shoe boxes. This particular branch of the trade is looking for steady improvement at any time now in preparation for the holiday and winter demands.

The Kennelley Paper Company of Massachusetts, with offices at 10 High street, report this week the taking over of the Champion Coated Paper Company's lines.

The New England Paper Merchants Association will hold its regular fall meeting at the Harvard Club, Wednesday, September 16. An executives' luncheon will be held at 1 p. m. and the executives and salesmen's dinner will be at 6.

Monroe to Retain Paper Dish Industry

MONROE, Mich., September 14, 1925.—After all the testimony had been introduced in the circuit court last week, in the case of J. J. Corcoran, of this city, against Fred M. Longnecker, asking for an alleged partnership accounting and for the appointment of a receiver, an amicable adjustment was reached whereby Mr. Corcoran sold out his interest in the business to Mr. Longnecker, who will continue the business.

The business was established six years ago for the manufacture of paper dishes and it was asserted that the concern had so prospered that the daily output was 400,000 per day.

The consideration and settlement were not announced. Mr. Longnecker is a banker at Delta, Ohio, it is said. Mr. Corcoran's future plans are unannounced.

How Do You Keep Dryers Clean?

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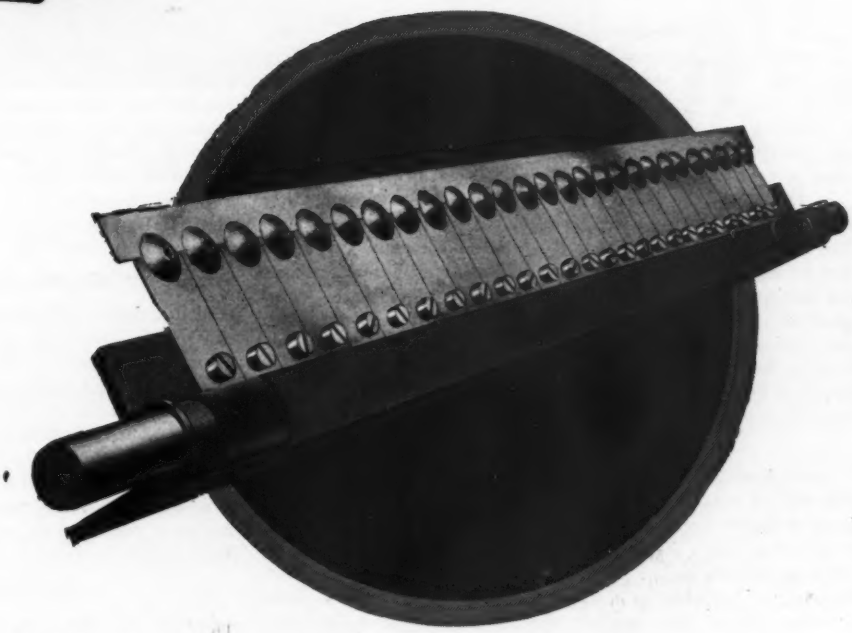

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Forthcoming General Election of Great Importance to the Canadian Industry — Intensive Campaign Planned to Reduce Fatal and Non-Fatal Accidents—Canadian National Railways Dispose of Pulp Wood Holdings to the Acme Timber Co., of Sudbury, Ont.

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ontario, September 14, 1925.—Business in the paper line continues about the same and there is little change to record. In some ranges the volume is up and in others it is down. Envelope makers and manufacturing stationers are very busy but book papers have been rather quiet for the past few days. The paper box factories are getting busier and are using increased quantities of board, which has caused the mills in that line to speed up a bit and run very nearly to capacity. One large American concern, which has been doing business in Canada for some years in the board and bristol line, reports that its trade in the Dominion has fallen off considerably of late owing to the superior quality of Canadian goods and the disposition on the part of many consumers to purchase home products in the pulp and paper line, wherever possible.

In the waxed paper arena, there is a large volume of business but considerable price cutting has been resorted to, with the result that some concerns are not pushing trade as much as they were and are hoping that time will teach some of the price sacrificers a lesson. There was formerly a very good understanding among the concerns making waxed paper but others entered the field some months ago, and this has played havoc with profits.

In rag stock, the market is very satisfactory, with a fairly strong demand. No advance in prices has taken place, as dealers feel, in their own interest as well as that of the mills, it is better that things go on as they are during this period of transition and the market remain in a stabilized condition. The waste paper situation is rather slow, with merely a moderate call from the mills and only small stocks in reserve. It is easy to sell the stock now in the hands of collectors and the condition of affairs is largely a mark-time one for the present, until it is seen whether the mills will get busier.

Tariff Is Big Election Issue

The federal government has been dissolved and a general election will be held in Canada on October 29. The Conservatives favor a higher tariff and the trend of the Liberal party during its past four years of administration has been in the direction of reducing customs duties. Naturally, most manufacturers endorse the policy of a higher tariff, although no changes have been made by either political party in recent years that would affect the paper business. In response to an inquiry as to whether any fiscal alterations had been made in customs duty within the past ten years, which would have any bearing on the industry of paper box making, an official of the Department of Customs and Excise, Ottawa, said that the duty on papeteries, envelopes and all manner of papers has remained at thirty-five per cent since 1907. It was also stated that straw board, mill board and all material entering into the manufacture of paper boxes had been twenty-five per cent for a longer period than ten years and was still unchanged.

One Manufacturer Is Opposed

Although, as stated, manufacturers do not as a rule oppose increases in tariff, one large Toronto concern has posted up a notice to the effect that while it has no desire to dictate to its employees how they should vote in the coming election, yet it wants them to vote intelligently. The following is added: "The increase in the tariff will increase the cost of the materials used in our goods and will compel us to raise our prices. This will restrict their sale and so reduce either the number of employees, their hours of labor, or both. Increase in the tariff is increase in taxation and is followed by an increase in the cost of goods, increase in the cost of labor and in lower demand for labor. Will that make Canada prosperous?"

Paper Merchants Will Meet in Montreal

As a result of a questionnaire sent out to the members of the Canadian Paper Trade Association regarding the place of meeting of the next annual convention, it has been decided to gather in Montreal about the third week of October next. Winnipeg was the second choice. R. I. Finlay, of Toronto, is president of the association, which convened in Toronto last fall. The officers are now busy drafting a program of interest and instruction for the coming event.

John F. Ellis Sets Up Record

John F. Ellis, honorary president of the Canadian Paper Trade Association, and head of Barber-Ellis, Limited, manufacturing stationers and paper dealers, Toronto, was present at the directors' luncheon on Manufacturers' Day at the Canadian National Exhibition. He has attended every exhibition for the last forty-seven years, or since the inception of the big fair. Mr. Ellis, who is now in his eightieth year, is still active in the paper trade and is a former president of the Canadian Manufacturers' Association, of which he was one of the founders. Later he was Treasurer for many years of that body.

Mexican Paper Man Visits Toronto

Alvaro Suso, of Mexico City, Mexico, was among the visitors to Toronto during the past week. He has just started in the paper jobbing business there and is in Canada on his way to Europe, seeking Canadian representation of paper mills. He says that affairs in the Mexican republic are quite tranquil at present and conditions in every way are getting better. He added that there is considerable paper manufactured in his country and that the largest concern is the Company of Paper Manufacturers, which turns out about 275,000 pounds daily of general paper lines, including kraft, coated stock, etc., 65,000 pounds of sulphite pulp, and 90,000 pounds of ground wood pulp.

Conferring on Safety Work

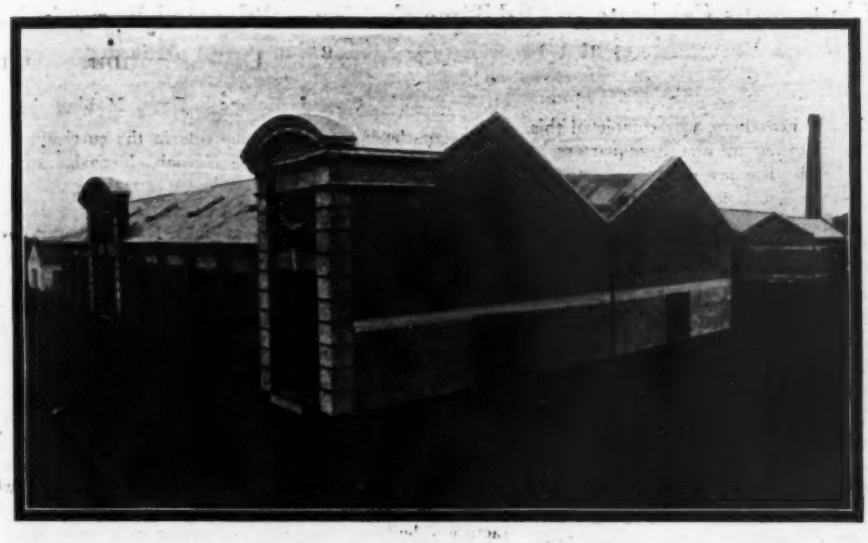
A joint meeting of the Employees Committee and the directors of the Ontario Pulp & Paper Makers Safety Association was held in Toronto lately, when questions of interest to the paper industry relative to the Workmen's Compensation Act and problems connected with accident prevention were discussed. Plans were made to start an intensive campaign to reduce fatal and non-fatal accidents in the interest of economy, whereby the assessment rating, which is now being paid by the mills to the Workmen's Compensation Board, will be materially lessened.

Notes and Jottings of the Industry

Fred W. Halls, wholesale paper, Toronto, has been re-elected a director of the City Club of Toronto, of which he is one of the founders and to which a number of paper merchants belong.

The old Foley-Rieger pulp plant at Thorold, which has been idle for a long time, has been taken over by the Davy Pulp & Paper Company. The property is now being put into shape for the resumption of operations in the production of ground wood pulp.

Norman Harrower, of Linton Bros. & Co., Fitchburg, Mass., was in Toronto and Montreal during the past week on business.



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Melbourne

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With them it is day time while we have night, and winter during our summer. Through all the seasons, and all the days and nights Dilts Beating Engines make paper in Australia.

They understand that "their paper is made in their beaters," and they must use good beaters to make good paper,—hence Dilts Beating Engines.

For sixty years our shops have been producing Hollander type Beating Engines and they are in use literally "around the world." Now we also build the Dilts approved NEW TYPE Beating Engines which are superior to others in combining High Speed, Rapid Mixing, Uniform Beating, Quick Dumping, and **no increase in power consumption.** The Dilts approved NEW TYPE is truly a remarkable Beating Engine.

Send for list of users, names of recent purchasers, and list of our unshipped contracts. You will be interested.

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EXPORT OFFICE ~15 PARK ROW~ NEW YORK CITY

Paper Mill Activities in the Fox River Valley

Badger Tissue Mills of Kaukauna Move to Much Larger Quarters—Employees of Combined Locks and Little Chute Mills Celebrate in Old Time Fashion—Pulpwood Burns in Yards of Northern Paper Mills at Green Bay—To Teach Paper Making

APPLETON, Wis., September 14, 1925.—Final work of moving the Badger Tissue Mills, at Kaukauna, near here, was completed this week, and the company now is operating its new headquarters in the building formerly occupied by the Kaukauna Paper Company, just off Dodge street. The former location of the factory was on W. Second street.

On July 17, Louis F. Nelson, acting for the Badger Tissue Mills, bought the machinery and fixtures of the former Kaukauna Paper Company at a receiver's sale. There were two other bidders at the time. The Badger Tissue Company is a local organization, and all its stockholders except one are residents of Kaukauna. This one was a resident of Kaukauna at the time the company was formed ten yaers ago, but since then he has moved out of the city.

Growth of Organization

The organization has grown from a small concern hiring only a handful of men to a business that is at present turning out 250 cases of product every day. The company now is employing about 35 persons. By moving from the old quarters to the building now occupied, the mill has doubled its floor space and storage room, increased production by 100 cases a day and is able to employ more men. The building is owned by the Green Bay and Mississippi Canal Company of Appleton, and the power is purchased from the Kaukauna municipal power and light plant.

Paper Makers Celebrate Labor Day

Employees of the Combined Locks and Little Chute mills of the Combined Locks Paper Company celebrated Labor Day with a big picnic in the Combined Locks village park, according to a custom of several years.

Labor Day having become rather stagnant in Appleton during the last few years, this city was given a real touch of color by the beautiful parade of paper mill employees, greatly surpassing the parade of Appleton's organized labor. The parade started at 9 o'clock and passed through Little Chute, Kaukauna, Kimberly and Appleton, and was the most beautiful of any held in the Fox River Valley for years. Almost every workman who had an automobile was entered in the parade, making the procession about three miles long.

Activities after the parade were resumed in the village park with about 2,000 persons in attendance. Other events included a baseball game between Combined Locks team and the Milwaukee Eagles, band concert, dancing contests, and dancing.

Paper Maker Meets With Accident

A workman of the Riverside Fibre and Paper Company, Appleton, Norman VanderHyden, suffered a double fracture of the left leg Sept. 9 when he was caught between a roller and a felt blanket of a paper machine and carried around the cylinder.

Pulpwood Burns at Green Bay

Fire in log piles that threatened the pulpwood yards of the Northern Paper Mills of Green Bay broke out on the afternoon of September 10. The blaze was not extinguished until the following morning. The loss was approximately $15,000.

To Build Dam in Flambeau River

C. E. Collins and L. E. Meyers, Chicago, have announced plans for construction of a gigantic dam at the headwaters of the north fork of the Flambeau River in Iron County. The dam, when completed, will impound water covering 18,000 acres.

To Add Course in Paper Making

One of the greatest advancements in the curriculum of the vocational schools at Appleton, Neenah, Menasha and Kaukauna will be the addition of a course in paper making this year. Classes will be conducted in night school so as to give every one who wishes it an opportunity to attend. No instructor has thus far been engaged for this department. When a competent instructor is found he will alternate teaching in the various paper mill cities of the Fox River Valley. By making him an itinerant instructor and thus dividing the salary to be paid him among the four cities, the schools can afford to employ the best teacher obtainable.

Appleton Paper Mills Exhibit

Appleton paper mills had an exhibit in the Wisconsin Products Exposition of the Wisconsin state fair at Milwaukee last week that eclipsed anything of its nature ever seen in the state. Local mills had a large portion of the Appleton section in which they showed the various products, and in another section of the Manufacturers' building they, in co-operation with paper mills of other cities, illustrated the story of paper from the raw material to the finished product.

Census of Appleton Paper Mills

Statistics compiled by the United States census bureau in conjunction with the Appleton Chamber of Commerce on local industries were published recently. They showed that at the time of the census the six paper mills of this city employed a total of 1,179 persons at an annual wage of $1,280,323, while the value of the mill products totaled $8,725,536 in that year. Three paper goods plants employed a total of 263 persons at a wage of $251,253 and the value of products was $1,801,814.

New Lines of Paper Announced

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., September 14, 1925.—Paper manufacturers and distributors are mailing samples of fine papers, cover stock, etc., to buyers of printing and advertising.

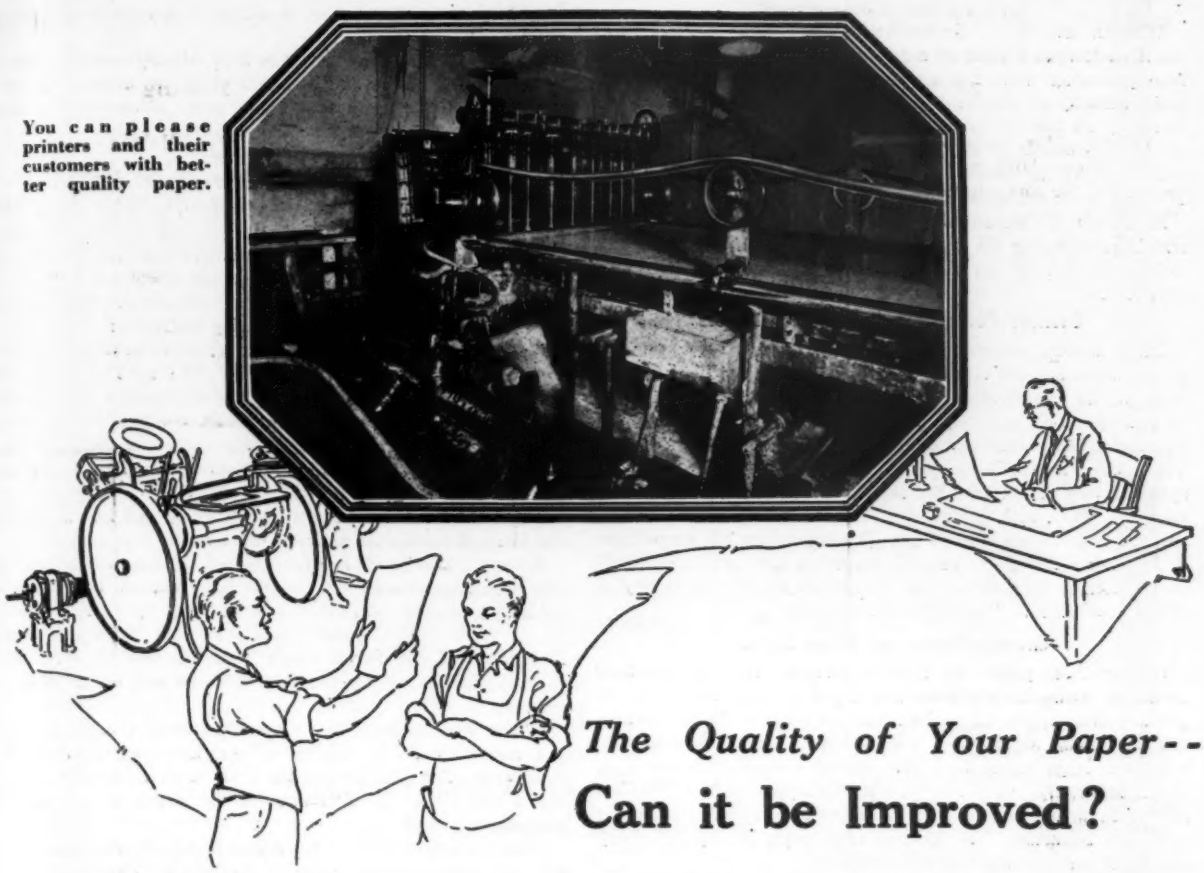
The J. W. Butler Paper Company has announced the addition to its line of fine papers of Buckeye Antique Text Paper, a new product of the Beckett Paper Company, and has mailed samples to the trade. This paper is distinguished by unusual beauty of tone and surface and is obtainable in white and ivory, both laid and wove. It is manufactured with deckle edge.

In calling attention to their Unity Bond, the Chicago Paper Company, through its advertising manager, James L. Smith, is offering what it terms a very interesting and helpful book on profitable letters, entitled "Letters that Strike Home."

The Chicago trade has received through the mail samples of Potomac Cover Stock, sent from Washington, D. C., by the District of Columbia Manufacturing Company, manufacturer of the "Executive Line" of cover and blotting papers. The James White Paper Company is mentioned as the Chicago distributor of this line of covers.

The S. D. Warren Company and the United States Envelope Company have made broadcast announcement of their efforts at standardization of envelopes and the creation of the particular line of envelopes developed by them recently. The Chicago Paper Company and the Paper Mills Company are listed as paper merchants representing the Warren Standard Sales Units in the Chicago market.

You can please printers and their customers with better quality paper.



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Can it be Improved?

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It produces paper of uniform caliper and of better formation together with the absence of lumps and foam spots. These results are obtained at an actual saving in cost made possible by the increased production of better paper and the elimination of aprons and slices which saves in time and reduces much wear on the wire. Let us show you how the Voith Inlet will do this for you.

The Inlet Will Improve Your Paper

It makes no difference whether you are making Sulphite Bond, Book, Kraft, News, Sulphite Wrapping or tissue you can better your paper with the Voith Inlet. At the same time you can cut the costs of production. Give us an opportunity to prove these statements. A letter will bring an illustrated booklet that will not fail to interest you. Write that letter to-day.

VALLEY IRON WORKS CO.

APPLETON, WISCONSIN

New York Office: 350 Madison Ave.

Keen Competition In Mexican Paper Market

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 16, 1925.—The Mexican paper market is dull at present owing to the fact that local retailers are heavily stocked with European papers, which they are finding some difficulty in disposing of in view of the general depression in nearly all lines of trade, says a report to the Paper Division of the Department of Commerce from Assistant Trade Commissioner Ullrich at Mexico City. Discussing competition in the Mexican paper market in some detail, he continues:

Most lines of German-made papers have advanced about 25 per cent in price during the past several months, but are still reported to be from 20 to 25 per cent under American quotations in competitive lines.

German Competition in Writing Papers

Cheap writing papers containing more than 75 per cent of ground wood are still coming in in fairly large quantities, and are being sold at present at an equivalent of 5¼ cents per pound, f.o.b. New York. This is an advance over the prices ruling at the beginning of 1925, which was equivalent to 4¼ cents per pound, c.i.f. Vera Cruz. The price on writing papers with a wood content of approximately 45 per cent has also advanced (from $5.80 per 100 pounds to $8.16, both quotations c.i.f. Vera Cruz). This grade of paper pays an import duty of only 12 centavos per kilo (equivalent to 2.7 cents per pound), whereas American writing papers, which do not contain over 40 per cent ground wood pulp, pay a duty of 25 centavos per kilo (equivalent to 5 cents per pound).

German Tissue and Crepe Papers

German tissue papers are reported to have practically displaced American tissues in this market as they sell for at least 10 to 15 per cent cheaper, and are well liked as the colors are much brighter and the texture of the paper is considered stronger and finer.

German crepe papers have also proved a strong competitor to American brands. It is now possible to buy crepe paper of German manufacture in rolls of 8 to 10 feet at less than 2 cents per roll, f.o.b. Hamburg. This German crepe paper is of good quality and is put out in a wide variety of colors.

German Competition in Other Lines

The glassine paper sold here at present is almost entirely of German origin. German firms are offering a fine quality of this paper at approximately 12 cents per pound, c.i.f. Vera Cruz, while American paper ranges in price from 15 to 18 cents a pound, f.o.b. New York, for qualities considered inferior to the German article.

German exporters are also reported to be obtaining the trade in manila and machine-glazed kraft wrapping papers, and, to a less extent, in the better class of bristols.

Domestic Competition

Until a short time ago some Swedish newsprint paper was coming into the ports of Tampico and Vera Cruz, but these shipments have been reduced following the announcements by the mills at San Rafael of a reduction in newsprint to 22 centavos per kilo (equivalent to $4.96 per 100 pounds). The domestic mills have recently begun the manufacture of a litho paper, coated on one side, which is of very good quality and which they are selling at a price equivalent to 8 cents per pound, f.o.b. New York. This paper is in demand by the cigarette factories, which are reported to consume some hundreds of tons annually.

The mills have also undertaken the manufacture of a good class of bond paper containing at least 20 per cent rag pulp (which is cheaper in Mexico than sulphite pulp), at a price which is equivalent to 8 cents per pound, f.o.b. New York. These mills are also putting out a paper which does not contain more than 40 to 65 per cent ground wood, and sells at prices which make it competitive with the German writing paper containing 75 per cent groundwood. The quality of the domestic paper, however, taking into consideration finish and color, is said to be inferior to the German-made paper.

The mill at Loreto is reported to have recently started the manufacture of wax papers, and it is understood that this class will also soon be produced by the San Rafael mill. Heretofore this trade has been in the hands of American exporters.

Mill and Merchants Conference at Holyoke

HOLYOKE, Mass., September 14, 1925.—The third annual "mill and merchant conference" to be held by the Crocker McElwain Company and Chemical Paper Manufacturing Company, jointly, opened today at the Motel Nonotuck with address of welcome by Clifton A Crocker, head of the two companies. The program for the morning was for the following addresses:

"Modern Sales Practice applied to the paper business" by Harry J. Winsten of Winsten & Sullivan, Inc., of New York; "The 1925 advertising and promotion," C. H. Barr, manager of sales promotion; Making the paper book produce orders," C. T. Waite, John Carter & Co., of Boston; "My experience with the paper book," Claude Hartwell of the Rourke-Eno Paper Company, Hartford, Conn.

Buffet lunch was served in the small dining hall following which the usual departmental meetings were held.

After a buffet lunch had been served the convention broke up into departmental meetings. In the large banquet hall "How we put across Bantam Manifold" was described by C. K. Urquhart, Jr., of the Urquhart Paper Company of New York and Michael Pomerance of the Forest Paper Company also of New York. A discussion of agency relations followed and of the 1926 advertising.

In the small banquet hall a certificate bond meeting was held and report by K. S. Warner of the certificate bond advisory committee. The 1926 advertising plans were discussed and there was a talk by C. W. Townsend of the United States Envelope Company.

Dinner followed at 7, C. A. Crocker presiding, the speaker being Rev. Dr. James Gordon Gilkey of Springfield. The women, about 35 attending with their husbands, were given an auto trip to Spofford Lake, N. H., returning in time for dinner.

Wednesday's program an "Interwoven Covers Meeting,' an "International Covers Meeting," an "Economic Ledger Meeting," and a "Doeskin Cover Papers Meeting."

English Stereo Paper Advanced in Value

WASHINGTON, D. C., September 16, 1925.—English tissue paper for stereotype matrice have been advanced in value by the customs officials, because of the discovery by special investigators that certain special concessions were being made to American purchasers or agents, according to information received here. American manufacturers have complained of difficult competition on tissue papers, particularly on the special types, and one of the investigations made abroad showed that special discounts were being given to certain American purchasers. When this report was received the customs appraisers advanced the valuation to meet the English home market price. The importers appealed to the courts, and the customs courts have upheld the position of the customs officials, and disallowed the 10 per cent special discount which had been given.

Fort Dearborn Paper Box Co. Incorporates

CHICAGO, Ill., September 14, 1925.—James H. Gillison, Samuel Blair and Edward B. Sode have incorporated the Fort Dearborn Paper Box Company for $40,000 for the purpose of manufacturing boxes, containers, etc. The company is located at 2034 Canalport avenue.

FAST COLORINGS ON PAPER

FOR the production of orange and brown shades on paper of all grades, where better fastness to light is required, we recommend the following direct dyes:

National Erie Fast Orange CGP
National Erie Fast Orange AP
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These dyes will be found most economical for the production of all fast shades for which they are adapted.

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PROVIDENCE	CHICAGO	MONTREAL
HARTFORD	CHARLOTTE	TORONTO

NATIONAL DYES

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Paper Making Industry

Clarence J. West, Chairman

Production Limits of Our Paper Machines. Janata. Zellstoff U. Papier 4, 281-283 (Nov. 1924). The production limits of paper machines appear to depend on two factors: width of the machine, and its speed. The relations of these factors to the other parts of the machine and cost of construction are discussed. Increasing the width of a machine is chiefly a problem of costs, while the speed factor is one of construction.—J. L. P.

Treatment of Paper After Its Manufacture. G. Strecker. Wochbl. Papierfabr. 55, 2462-2464 (Sept. 27); W 2526-2528 (Oct. 4, 1924). A discussion of the operations, with practical suggestions, in the finishing of paper.—J. L. P.

Treatment of Paper After Its Manufacture. G. Strecker. Wochbl. Papierfabr. 55, 2942-2944 (Nov. 15); 3087-3090 (Nov. 29, 1924). General hints on the rewinding of paper and the conveyance of paper rolls,—J. L. P.

Smoothing Press. E. Marguet. Mon. Papeterie Belge 4, 533-539 (Nov. 1924); Pulp & Paper 23, 59-60 (Jan. 15, 1925); A smoothing press with bottom roll having excessive crown crushed the sheet in the center, while the edges were absolutely uncalendered. The trouble was overcome by supporting the bearings of the middle roll just enough to relieve the bottom roll of most of the weight of the other two rolls, but with sufficient contact at the center, due to the crowning of the bottom roll, to drive the uppper rolls from the bottom ones. The edges of the sheet were thus calendered between the top and middle roll, and the center between the middle and bottom rolls. Adjustment of the bearings of the middle roll allowed to compensate for wear of the rolls, until the crown of the bottom rolls has been practically completely worn down and the roll had to be regrund.—A. P.-C.

Improvement in Bearings and Lubricating Devices for Calender Rolls. N. Isherwood. Eng. pat. 221,346. A resilient Diaphragm or flexible ring of simple or multiple form is used for effecting a resilient oil-tight connection between the oil casing and the rotary parts of the machine.—A. P.-C.

Bearings of Calender Rolls. Bertrams, Ltd. Eng. pat. 224,-676. The patent covers certain constructional features of calender roll bearings of the kind in which the brace is pivotally mounted about a secondary axis, perpendicular to the axis of the bearing, and along which secondary axis lateral adjustment for the brass is provided. The construction allows adjustment of the roll to be effected by a single screw from the front of the bearing, instead of the rear, and with the casing and brass each all in one piece, and tthe holes and sins in line a very simple construction of adjustable bearing is obtained.—A. P.-C.

Paper Cutting. A. E. Ryberg. Eng. pat. 211,131. The paper web is wound on cutting reels without longitudinal cutting, and is passed from them through a longitudinal cutter to a second reel of large diameter. The cutting takes place on the second reel. The idea is to avoid waste paper and loss of time.—A. P.-C.

Attachment for Paper Winder. F. W. Vickery. Eng. pat. 223,273, June 16, 1923. The purpose of the invention is automatically to transfer the web from the full reel to an empty shell, as follows: when the winding reel is nearly completed, an empty shell is placed on two cans, which are carried on the usual rocking frames for controlling the reel in operation. The full reel is lifted out of the rocking frames for controlling the reel in operation. The full reel is lifted out of the rocking frames by the crane. The rocking frames quickly and automatically return to the starting position, to which position also the empty shell is automatically transferred during the movement of the rocking frames by the cams, so that the arrival of the empty frames and of the empty shell at the starting position synchronized. As soon as the empty shell reaches its bearings in the rocking frame, the web is automatically severed and the incoming end bound round the empty shell in any suitable manner, several of which are described.—A. P.-C.

Energy Requirements of the Paper Machine. Wilhelm Stiel. Papierfabr. 22, 80-90 (June 17, 1924). The energy requirements of the paper machine are discussed in a very comprehensive manner. With the aid of diagrams and tables, the following topics are taken up: dependence of the specific motive power, which is defined as the power required per m. of screen width, on the rate of operation; the influence of the weight of the sheet, the width of the screen, and the machine drive on the energy factor; the drying operation; wet presses; calendars; suction rolls; calculation of the energy requirement of the machine; relation of machine construction to the energy requirement; and the power factor for newsprint machines.—J. L. P.

Rotary Saveall. E. Lamort and M. Lamort. Fr. pat. 581,776. In order to increase efficiency of outward-flow rotary savealls the path of the white water is increased by providing its inner surface with spiral-shaped flange which acts as a baffle for the white water which is delivered inside the rotary drum. The spiral also serves to hold the inner screen in position against the outer backing perforated metal plate.—A. P.-C.

Bids and Awards for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 16, 1925.—The Government Printing Office has received the following bids for 80,000 pounds of various sizes 30 per cent white rag mimeograph paper: Lindemeyr & Harker, at 9.92 cents per pound; R. P. Andrews Paper Company, 9.2 cents; American Writing Paper Company, 10.17 cents; Dobler & Mudge, 10.24 cents; Bryant Paper Company, 9.02 cents; Reese & Reese, 11.89 cents.

The Printing Office has also received the following bids for 58,469 pounds of various sizes first class chart paper: Barton, Duer & Koch Paper Company, 34.25 cents; Dobler & Mudge, 34.19 cents; R. P. Andrews Paper Company, 27.24 cents; and American Writing Paper Company, 27.5 cents.

The following bids have been received for 1,810 pounds of 22½ x 28½—181, white index bristol board: Carew Mnaufacturing Company, at 26 cents per pound; R. P. Andrews Paper Company, 28 cents; American Writing Paper Company, 28 cents; Reese & Reese, 27.7 cents; Maurice O'Meara Company, 29 cents; Old Dominion Paper Company, 28.99 cents; and Carter, Rice & Company, 29.6 cents.

The Printing Office will receive bids on September 18 for 12,500 pounds (1,000 reams) of 21 x 32—12½, white record manifold bond paper.

The Carew Manufacturing Company has been awarded the contract for furnishing the Government Printing Office with 1,810 pounds of 22½ x 28½—181, of white index bristol board at 26 cents per pound, bids for which were received on August 5.

Dobler & Mudge will furnish 14,500 pounds (1,000 reams) of No. 8, 21 x 32—14½, manifold onionskin paper at 10.18 cents per pound, bids for which were received on August 7.

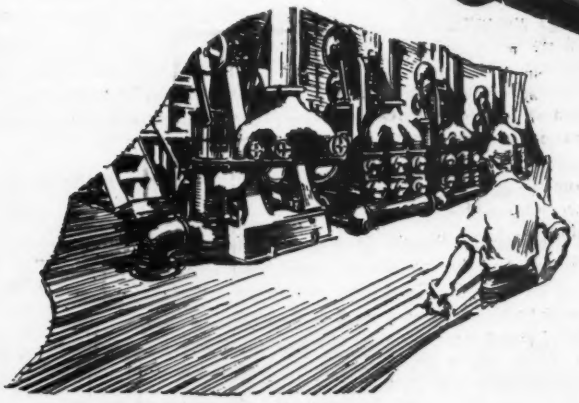
The Southworth Company will furnish 8,000 pounds (500 reams) of 21 x 32—16, No. 9 white manifold paper at 30 cents per pound, bids for which were received on August 10.

Service 24 Hours Day in and Day out

"BELOIT" Pumps have the sturdiness that insures 24 hours of service day in and day out. They are built for endurance such as no other unit in a mill can stand. Under the most trying conditions, in miniature lakes and ponds, "Beloit" pumps continue operating with remarkable efficiency. They stand the "gaff," they do their task well, with little attention.

There's a "Beloit" Pump for every purpose. The two illustrated are examples. Let us figure with you when in the market.

Send for Special "Pump Bulletin" now.



BELOIT PUMPS FOR SERVICE

Beloit Iron Works **Beloit, Wis., U. S. A.**

Since 1858 Builders of Paper, Board Mill and Container Plant Machinery

Obituary

Hiram F. Kingsley

CLEVELAND, Ohio, September 16, 1925.—Hiram Frederick Kingsley, who died at his summer residence, 25825 Lake Shore boulevard, Sunday night, August 30, was born in Fort Edward, N. Y., June 14, 1856. His parents were of old American stock, his mother being English and his father French and English. Mr. Kingsley came to Cleveland in 1872 and engaged in business with the Cleveland Window Glass Company and later with the Cleveland Paper Company. In 1888 he established the Kingsley Paper Company and was later joined by his brother, General Herbert B. Kingsley. Together they developed this business and made it one of the largest institutions of its kind in Cleveland.

Mr. Kingsley was a member of the Cleveland Chamber of Commerce, the Cleveland Athletic Club, the City Club and a number of social organizations. He was distinctly a home loving man, and during the past twenty-four years gave much time and thought to developing and beautifying his summer residence on the lake shore. Up to the time of his marriage to Mrs. Jennie Wise Hunter in 1902, Mr. Kingsley lived with his sister and brother, Mrs. Charles E. Crawford, and General Kingsley, 2039 East 81 street. He is survived by his widow, by his daughter, Mrs. E. H. Cox, and by his sister, Mrs. Crawford, and two brothers, General Kingsley and Charles W. Kingsley.

Process of Making Pulpwood is Shown

TORONTO, Ont., September 14, 1925.—The Canadian National Exhibition has been noted for the educational opportunities it offers to the public. This is particularly in evidence in one section of the Machinery Building. For here the public has a chance to get valuable information on the pulpwood business.

In a booth operated under the auspices of the Canadian Pulpwood Association daily demonstrations are given to show how pulpwood is prepared. In one corner an operator shows how the logs go through the process of machine-rossing.

Two processes of handling the logs are shown; these are hand peeling and machine-rossing. The latter, though it sounds very technical, is really a peeling of the logs by machine.

The booth is a veritable small pulpwood mill. In one corner is a great pile of logs. And three times daily the rossing machine clatters out its tune. An operator rolls logs into a rotating plane. Round and round they twirl to emerge cleared of bark and knots. Another operator shows how the logs are hand peeled. A log is set up in a stand and by hand he shaves it smooth, cleared of bark.

The attraction that this exhibit has proved to be is evidenced in the fact that the demonstration has drawn spectators from every section of the hall until they are massed in front of the booth.

Major T. A. MacLean, of Halifax, N. S., who is in charge of the exhibit as special representative of the association, stated that many people who would pass through the Exhibition had never seen a stick of pulpwood, though some had read a good deal about the business in the press, and it was hoped that the exhibit would impress upon their minds the fact that it is a valuable industry to Canada, entailing the manufacture of machines of various kinds, including saws, gasoline engines, rossers, etc., which are made in our Canadian factories, and that the pulpwood is processed as much as sawn lumber.

Placards displayed in the booth show that this business is of vital importance to the public, and in connection with it there is a particular question that must be settled by the people through the government. This is the question of embargo on pulpwood.

In reply to questions Major MacLean said: "For several years there has been violent agitation for an embargo on this product. Yet machine-rossed pulpwood costs more per unit of measure to produce than either rough sawn lumber or railway ties. Sap-peeled pulpwood costs as much per unit of measure as rough sawn lumber, and it wastes much less of the tree. When it is thus shown that the pulpwood business is on the same footing as the lumber business why should there be any embargo on it or any agitation for an embargo?"

Continuing, he said: "That the public, generally, had seen a great deal of propaganda for embargo on the export of pulpwood and had formed an opinion in favor of that measure without understanding the situation in the pulp and paper and pulpwood industries. Many people were not aware that 85 per cent of the total Canadian pulpwood stand was owned by the crown and under embargo, and that the present agitation was concerned solely with timber which is the private property of farmers and other citizens, and that it embraced at most ten to fifteen per cent of the total. He further pointed out that 75 per cent of all the timber cut for pulpwood is manufactured into pulp or paper in Canada, and that the present Canadian pulp and paper mills find it impossible to dispose of their total capacity output in the markets of the world.

When asked if an embargo on export of pulpwood to the United States would not favor the Canadian manufacturer by creating a greater demand for his paper in markets now supplied by American mills operating on Canadian pulpwood, Major MacLean said: "Canada has no monopoly of pulpwood. Is it not more reasonable to conclude that American mills, which now purchase a portion of their wood from Canadians, would, if this were denied them by an embargo, continue to produce their paper from alternative sources and that Canada would have lost a very valuable export business that employs many thousands of her citizens and brings in more than $15,000,000 per year of outside money?"

Asked as to alternative sources, he replied that a large quantity of cheap Canadian pulp has, during this year, been imported into the United States to replace the product of Canadian pulpwood with the result that Canadian farmers and pulpwood producers have now on their hands many thousands of cords of pulpwood cut last winter and still unsold.

"If the situation, under an open market, is such, what would it be under a closed one such as an embargo would produce? And, by the way, let me say that I find, in talking with visitors to this booth, that the term 'embargo' is not fully understood.

"Embargo means absolute prohibition on export, and not merely a tax or partial restriction.

"We are pleased with the attention given our booth by visitors and welcome inquiry as to the pulpwood industry.

"The Canadian Pulpwood Association is to be congratulated upon the interesting and instructive exhibit which they have made."

Paper Mills at Esthonia to Make Bank Note Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 16, 1925.—The mills at Rapina, Esthonia, which have hitherto specialized in roofing boards, are seriously contemplating engaging in the manufacture of high grade papers for bank notes, bills, drafts, and similar purposes, according to a report to the Paper Division of the Department of Commerce from American Consul Groaniger, at Reval. The mills state that they will be able to consume all of the cotton waste in the country, and that it will be in their interest to have the export duty on this class of material increased.

High Honor for Charles F. Mansell

Charles F. Mansell, veteran paper salesman, who is associated with the Toronto office of the Howard Smith Paper Mills, was at the recent annual gathering in Victoria, B. C., of the Sovereign Great Priory, Knights Templar of Canada, re-elected to the office of Grand Treasurer. This makes the nineteenth term for Mr. Mansell and he is receiving the congratulations of his many friends in the industry. For a long period he was sales manager of the old Toronto Paper Manufacturing Company, of Cornwall.

WORLD-WIDE REPUTATION

1855

"MEARACO" BRANDS

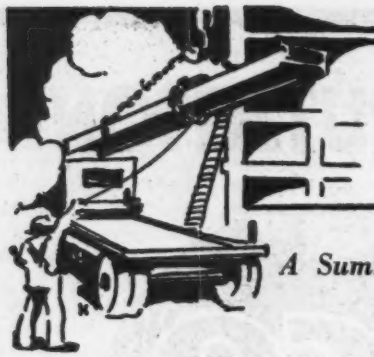
1925

70 Years of International Service to the Paper Industry

The firm of Maurice O'Meara Co. is proud of its long record of faithful service. From a small and obscure beginning in 1855 it has kept pace with the march of progress and has gradually become the outstanding factor in the paper trade world assuming the role of leadership in the industry.

Today MEARACO BRANDS are internationally known. Its products not only enjoy a wide distribution throughout the entire United States, but are sold through 25 foreign offices the world over wherever paper products are used.

To achieve this leadership and world wide reputation has meant constant adherence to principles embodying character and service established 70 years ago by the founder, Maurice O'Meara. This same spirit that spread the MEARACO BRANDS over the 7 seas is still the guiding rudder of service in the O'MEARA organization. No task is too great or too small. No employee too important to extend this service which has been the dominant factor in the success of this company.



CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Chicago, Ill.—The Waterways Paper Products Company, 3201 South Kedzie avenue, has preliminary plans under way for the erection of a new two-story and basement plant at Kedzie avenue and 32nd street, reported to cost about $50,000. D. H. Burnham & Co., 160 North La Salle street, are architects. W. A. Strong is president.

Sioux Falls, S. D.—The Sioux Falls Paper Company, 204 East Tenth street, has completed plans and will proceed with the erection of a new plant on local site, to be three-story and basement, 78x150 feet, estimated to cost $75,000. It will be used largely for storage and distributing service. A general contract was recently awarded to the Sioux Falls Construction Company. Perkins & McWayne, Paulton building, are architects.

Alexandria, Ind.—The Alexandria Paper Company has authorized the immediate rebuilding of the portion of its mill destroyed by fire, September 4. An official estimate of loss has not been announced.

St. Louis, Mo.—The St. Louis Label Works, Inc., 925 North 11th street, manufacturer of paper specialties, will begin the erection of its proposed three-story plant on site selected at North Market and Glasgow streets. It will be 80 x 180 feet, estimated to cost close to $100,000, with equipment. A general building contract has been awarded to the Fruin-Colnon Construction Co., East St. Louis, Ill. Leonard Haeger, 3844-A Utah street, is architect.

Nutley, N. J.—George La Monte & Son, manufacturers of special processed papers, have preliminary plans under way for the erection of a new addition, to be one-story, 50 x 100 feet, designed largely for color work, including mixing, etc. It is understood that bids will be asked at an early date. Fletcher-Thompson, Inc., 542 Fairfield avenue, Bridgeport, Conn., is architect and engineer.

Williamsport, Pa.—The C. A. Reed Company has been chartered under Delaware laws to take over the local company of the same name, manufacturer of crepe papers and other paper products, and to consolidate with the Jopson Manufacturing Company, State street, Boston, Mass., manufacturer of special tag-making machinery, etc. The new company is disposing of a stock issue of $800,000, the proceeds to be used in connection with the merger, and for proposed extensions and betterments. C. A. Reed is president.

Baltimore, Md.—C. J. Taylor & Co., 201-3 West Camden street, manufacturer of paper boxes and containers, have tentative plans under advisement for the rebuilding of the portion of their plant destroyed by fire, Sept. 1. An official estimate of loss has not been announced.

Norwood, Mass.—Bird & Son, Inc., East Walpole, Mass., manufacturer of paper roofing, etc., has plans for a transformer substation at its local plant, for which work will soon be placed under way. It will be used for service at the mill. The J. J. Prindiville Co., Framingham, Mass., has the general contract.

Hamilton, Ohio—The Fried Paper Stock Company, Maple avenue, near 7th street, is said to have tentative plans under advisement for the rebuilding of the portion of its plant recently destroyed by fire with loss reported at close to $60,000, including equipment and stock. The reconstruction will cost approximately a like sum. George A. Fried is president.

St. Louis, Mo.—The Schleicher Paper Box Company, 1811 Chateau avenue, is said to be arranging plans for the erection of a new plant on Bingham street, comprising a two-story and basement building, estimated to cost close to $100,000, with equipment.

Montreal, Que.—The International Paper Company, 100 East 42nd street, New York, is said to be perfecting plans for the early construction of the proposed addition to its bleached pulp mill at Kipawa, Que., designed to increase the output from 170 to 250 tons of material per day. The extension, with machinery, is estimated to cost in excess of $1,000,000.

Three Rivers, Que.—The St. Maurice Paper Company, Montreal, is preparing plans for its proposed local mill. It will consist of a number of units, with power house, machine shop and auxiliary structures, estimated to cost in excess of $5,000,000, with machinery.

Powell River, B. C.—The Powell River Company is considering plans for the erection of two new additions to its plant, to be equipped for considerable increase in output. The expansion will cost close to $425,000, including equipment.

Fort William, Ont.—The Great Lakes Paper Company is completing plans and will soon begin work on its proposed local paper mill, consisting of a number of units, estimated to cost about $2,000,000, with machinery. The project will include a power plant and machine shop.

New Companies

St. Louis, Mo.—The Ajax Corrugated Paper Company has been incorporated with a capital of $14,000 to manufacture and deal in corrugated paper stocks. R. H. Pollak, Vinita Park, St. Louis, is the principal incorporator.

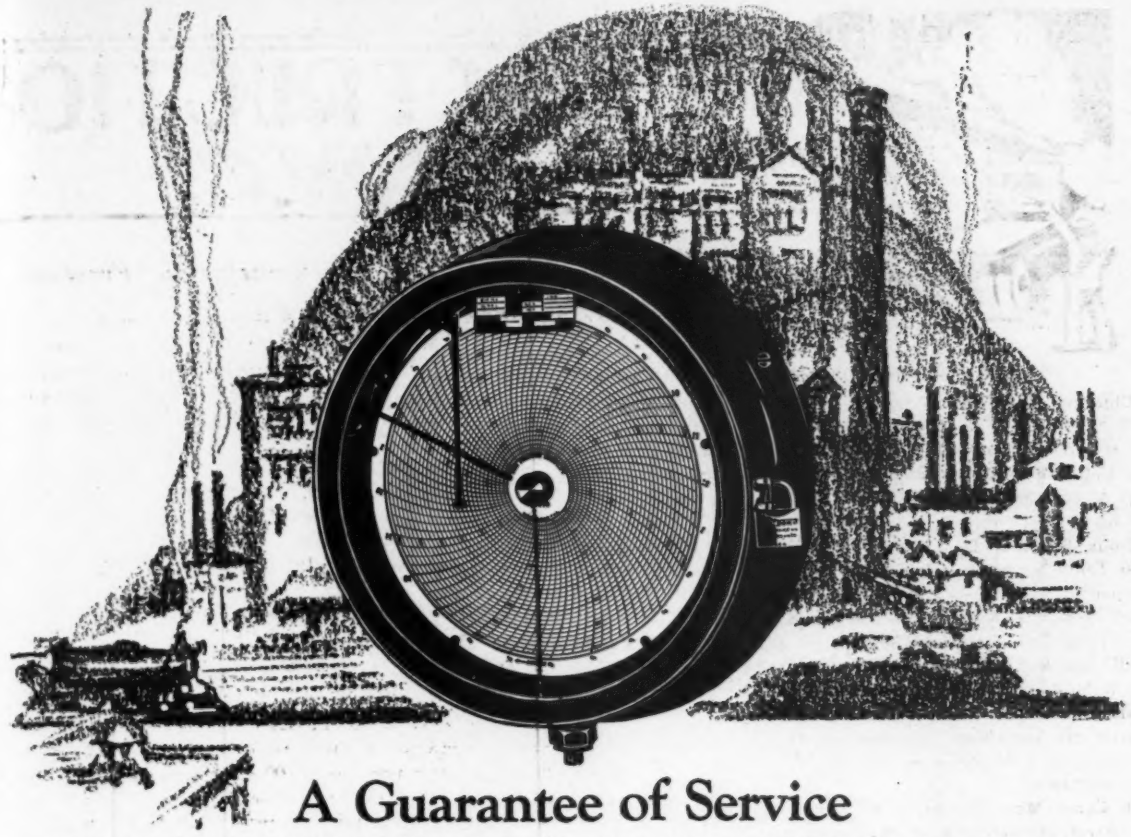
New York, N. Y.—The Handmade Paper Box Company has been incorporated with a capital of $10,000, to manufacture paper boxes and containers. The incorporators are E. Alexis, S. Sadow and N. Kramer. The company is represented by Samuel Loewy, 1440 Broadway, New York, attorney.

Toronto, Ohio—The Toronto Paper Manufacturing Company has been incorporated with a nominal capital of $500, to take over and operate a local paper mill, heretofore known as the Toronto Paper Mill Corporation. The incorporators are George E. Wisener, Carl H. Smith, Thomas Barry and W. H. Tipton. Operations will be commenced at an early date.

Newark, N. J.—The Lyon Company, Inc., has been incorporated with a capital of $125,000, to manufacture paper and other boxes and containers. The incorporators are Bertram and Mortimer Berla, and Norman Liebowitch. The company is represented by Sidney Simandl, 24 Branford place, Newark.

Chicago, Ill.—The National Paper Box Company, 12 North Sangamon street, has been incorporated with a capital of $35,000, to manufacture paper boxes and containers. The incorporators are Anton L. Holecek and Charles Fiala.

(Continued on page 40)



A Guarantee of Service

Back of the superlative service of every Foxboro Indicating and Recording Instrument is the marvelous and painstaking accuracy with which it is made.

A secret process enables Foxboro craftsmen to draw each Helical Tube so that it has the same characteristics as every other tube. Because the characteristics of every tube are known:

Foxboro Instruments are guaranteed to be accurate within less than 1 per cent of total scale range.

The Foxboro Helical Tube is guaranteed not to split, leak, set, or crack even when subjected to excess temperatures or pressures.

Lost motion has gone because twiddling adjustments have gone.

The New Type 3-A Chart Holder is the latest improvement in chart retention and is an exclusive Foxboro feature.

The chart slips into true center, is held securely and yet a twist of the tension head turns the chart to the correct time adjustment. Interchangeable with present chart holders.

Pen points are so polished that they glide over mile after mile of chart travel as smoothly as a shadow.

Every part of a Foxboro Instrument—clock, chart, capillary tubing, bulb—is the best that can be made.

In more than a quarter century of service, Foxboro Instruments for indicating and recording temperature, pressure and humidity have earned the admiration of all industry.

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FOXBORO

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THE COMPASS OF INDUSTRY

New York Trade Jottings

The Binders Board Association is to meet at the Canadian Club, in the Hotel Belmont, New York, on September 22.

* * *

John D. Rue, of the Pulp and Paper Section of the Forest Products Laboratory, of Madison, Wis., has returned to headquarters after a brief visit to New York.

* * *

The September issue of *The Mentor* contains an instructive and entertaining article, profusely illustrated, entitled "Paper Making from Papyrus to the Printed Page," contributed by Royal S. Kellogg, Secretary of the News Print Service Bureau, New York.

* * *

The Rushmore Paper Mills, Inc., of Brooklyn, whose plant was recently partially damaged by fire, are still attending to the needs of their many clients, as their warehouse, fortunately, escaped the conflagration. The plant is rapidly being rebuilt and will be in operation again in a few months' time.

* * *

The Pulp and Paper Trading Company, of 21 East 40th street, New York, announces that it has been appointed sole selling agent for Canadian Kraft, Limited, distributors of Wayagamack news print, with mills located at Three Rivers, Canada, possessing a daily capacity of 200 tons of news print. James T. Mix is associated with the organization as sales manager of this department.

* * *

The fall meeting of the News Print Service Bureau will be held in New York on October 20 and 21. On Tuesday, October 20, the meeting of accountants and engineers to discuss cost and operating problems will be held at the Canadian Club, in the Hotel Belmont. The usual Bureau meeting, with reports upon conditions in the industry, will be held at the Hotel Commodore on Wednesday, the 21st. Among other features of the program will be an address by an exceptionally well-informed observer upon present conditions in the European paper trade.

* * *

A syndicate composed of Henry D. Lindsley & Co., Inc., of New York, and Raymond, Rich & Co., Inc., of Boston, are offering a new issue of 32,000 shares of C. A. Reed Company Class A stock at $25 per share to yield 8 per cent, with participation in additional dividends. A new C. A. Reed Company is being organized under the laws of Delaware to acquire the business and assets of the old C. A. Reed Company, a Pennsylvania corporation manufacturing crepe paper, specialties, paper napkins and other products. The company will acquire the assets and business of the Jopson Manufacturing Company, which owns an automatic tag manufacturing and stringing machine, together with basic domestic and foreign patents.

* * *

A. J. T. Taylor, A.S.M.E., president of the Combustion Engineering Corporation Limited, of Toronto, is taking a small party of American and Canadian consulting engineers on a trip to Sweden to study the application of the Ruths steam accumulator. The party sailed aboard the *Majestic* last Saturday and will return about the end of October. The time will be devoted exclusively to the accumulator and to high pressure non-condensing turbines. The itinerary includes Sweden, Holland and Germany. Mr. Taylor was a member of the Anglo-Japanese Commission in Sweden last year following the World Power Conference. The party includes W. G. MacNaughton, secretary of the Technical Association of the Pulp and Paper Industry.

* * *

The Star Company, of New York, has consummated a contract with James Flett, of 9 South Clinton street, Chicago, whereby he will supervise the sale of all the waste paper, estimated at about 50,000 tons per year, accumulated by newspapers affiliated with the Star Company scattered in various parts of the United States. The Star Company is the operating company which controls all of the so-called Hearst newspapers. It is understood that Mr. Flett's contract includes all the waste paper produced by the Hearst newspapers in the following cities: New York City, Rochester, N. Y.; Albany, N. Y.; Seattle, Wash.; Washington, D. C.; Oakland, Cal.; San Francisco, Cal.; Los Angeles, Cal.; Chicago, Ill.; Detroit, Mich.; Milwaukee, Wis.; San Antonio, Tex.; Fort Worth, Tex.; Boston, Mass.; Syracuse, N. Y.; Atlanta, Ga., and Baltimore, Md.

Interest in Reforestation Growing

ALBANY, N. Y., September 16, 1925.—Indicating the widespread interest that is being taken in reforestation throughout New York State is the announcement of the Conservation Commission this week that orders for forest trees for planting this fall received up to date far exceed in number and volume any previous fall's orders. On September 3 there were on file in the Commission's office 173 orders calling for 1,333,625 young trees. A large percentage of these will go to pulp and paper firms and other wood products concerns. The number of orders will just about double the number received up to the corresponding date last year and the number of trees now on order is more than twice as many as were planted during the entire fall last year when more than 650,000 trees were sent out.

Many of the pulp and paper concerns of Northern New York which have adopted reforesting policies and plant regularly from year to year are taking a large number of trees this fall. One of the largest orders is that of the Northern New York Utilities, Inc., of Watertown, which has requested 180,000 red pine seedlings and 250,000 Norway spruce transplants. The American Hard Wall Plaster Company, of Utica, has ordered for fall planting 25,000 Scotch pine transplants and 1,000 Norway spruce transplants. Fifty thousand Norway spruce transplants will be set out this fall by the W. H. Loomis Talc Corporation, of Gouverneur. The St. Regis Paper Company will also plant a large number of young trees this fall, following out its reforesting policy.

G. W. Mosher Speaks on Paper Standardization

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., September 14, 1925.—The first meeting of the fall of the Western Massachusetts Purchasing Agents Association was held last Thursday night at the Deane Works. Austin C. Ross of the Rolls Royce Company, of Springfield, presided, and there were addresses by George W. Mosher of the White & Wyckoff Company, of Holyoke, who spoke upon standardization developments in the paper industry, and G. A. Peterson of the Crocker McElwain Paper Company, who spoke upon the conservation of lumber. C. W. Hodges, general purchasing agent of the Worthington Pump and Machinery Corporation, spoke of the transformation of the field of purchases and how it had become a specialized field.

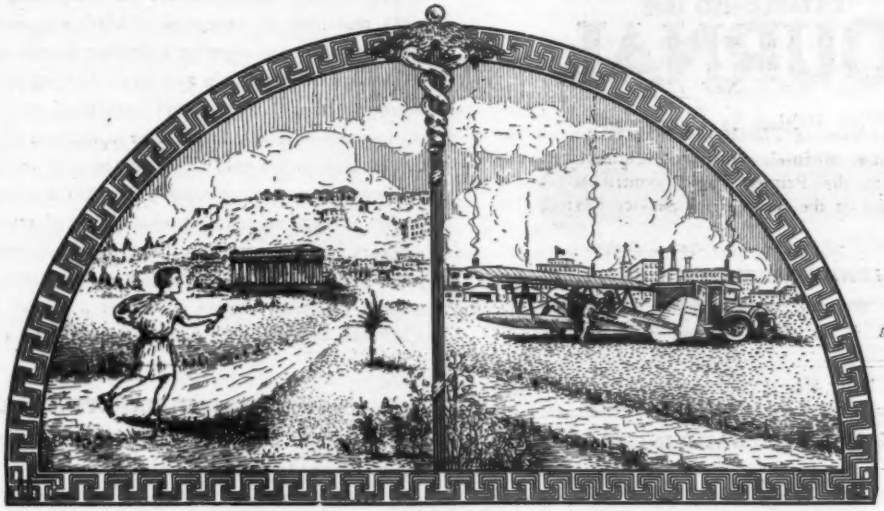
CONSTRUCTION NEWS

(*Continued from page 38*)

Wilmington, Del.—The Mason Fibre Company has been incorporated under state laws with a capital of $3,000,000, to manufacture fibre, heavy paper and kindred products. Registered office of the company is with the Corporation Trust Company of America, du Pont building, Wilmington.

Chicago, Ill.—The Marquette Paper Company, 608 South Dearborn street, has been incorporated with a capital of $50,000 to manufacture and deal in paper goods. The incorporators are Patrick J. Gallagher, Edwin T. Breen and Louis J. Donohue, all of Chicago.

Philadelphia, Pa.—The Norwood Paper and Paper Stock Company, care of the Corporation Guarantee and Trust Company, Land Title building, Philadelphia, has been incorporated under Delaware laws with capital of $25,000, to manufacture and deal in paper products.



Giving Wings to the Written Word

When Greek met Greek in the ancient days and business negotiations were started, the final decision usually required person-to-person conference. When it happened that the outcome was delayed and the closing date of the option was near at hand, then indeed did the letter transport of those days reveal its deficiency.

Many a time did the Attic business man write his belated acceptance upon a piece of treated sheepskin imported from Pergamum, roll this about a rounded stick, seal it with a wax impression from his official ring, and entrust it to a fleet-footed son of Hermes. Woe to the business deal if the messenger developed a weak heart or a stone-bruised heel!

The time that it required Athenian "special delivery" to convey a message from that center of culture to Megara, 30 miles away, now serves as quite enough for the winged descendants of Kitty Hawk to lift a half-ton of modern correspondence across the roofs and tree tops between New York and Chicago.

No longer does the mild-mannered sheep supply the basis of written records and the interchange of business agreements. Vegetable fibres—cellulose from shrubs and tress—white, and easy to write upon, now carry the business world's "yes" and "no".

Hammermill Paper Company

Erie, Pennsylvania

PAPER TRADE JOURNAL
ESTABLISHED 1872
With Which Is Combined
PAPER
The Magazine of the Paper Industry
HENRY J. BERGER, Editor

Member A. B. C. Audit Bureau of Circulations

Vol. LXXXI New York, September 17, 1925 No. 12

FOREIGN PAPER TRADE INCREASES

Exports of paper and paper products from the United States during the month of July were valued at $2,065,294, an increase of 6 per cent over the June shipments, and of 16 per cent in comparison with July, 1924, according to the Paper Division of the Department of Commerce.

Nearly all classes shared in this gain, the most noteworthy exceptions being news print and paper boards and straw board. Exports of the former, after the record breaking sales during June, declined sharply, the July shipments amounting to only 1,936,000 pounds, or 30 per cent of the preceding month's exports. A decrease in shipments of this class of paper to foreign countries, however, is not unusual during this season of the year, and the July exports are on a level with those of the same month in 1923 and 1924. Exports of paper boards and straw board, including box board, were considerably under those of July of last year, but the loss in these classes was more than offset by the larger shipments of sheathing and building paper and of wall boards.

Among the fine papers, consignments of papeteries and envelopes were smaller than during the same month in 1924, but exports of writing, surface coated, tissue and crepe, and carbon papers show notable increases. Shipments of book paper, miscellaneous wrapping paper, photographic paper, and paper bags, and boxes and cartons, which rank among the leading exports, were also larger than during July, 1924, and with the exception of photographic paper, exceeded the June exports of these classes.

Shipments abroad of paper base stocks during July totaled 10,743 tons, which were valued at $492,224, an increase in quantity of 50 per cent and in value of 60 per cent over the July, 1924, exports. Nearly 80 per cent of these shipments consisted of rags and similar waste, the balance being made up chiefly of sulphite pulp, of which 2,447 tons were exported in comparison with only 436 tons of other classes of wood pulp.

Imports of paper and board into the United States during July reached a total of $9,751,524. The bulk of these imports consisted as usual of standard news print, receipts of which show an increase of nearly 5 per cent compared with the same month last year, although about 7 per cent under those of June, 1924. Imports of other classes of paper on the whole show a downward trend, receipts of boards, which rank next to news print in the volume of shipments, kraft and miscellaneous wrapping paper, and of writing, surface coated, tissue, and photographic paper and paper boxes, all being under the receipts of the same classes during July, 1924, and with the exception of kraft wrapping paper and photographic paper, also showing a decrease compared with June.

Imports of wood pulp and waste for paper-making during July were valued at $8,647,669, and imports of pulp wood at $1,828,962, an increase of nearly 15 per cent in the case of the former and of 30 per cent in the case of the latter over the values of the same classes during the preceding July. On account of the generally higher average value of chemical pulp and rags and similar waste compared with a year ago, however, the increase in the value of paper base stocks, does not accurately represent the increase in the volume of these receipts, which as a matter of fact were only 4,263 tons, or 3 per cent greater than in July, 1924.

INTEREST IN SAFETY CONGRESS

The program for the fourteenth annual safety congress, which will be held at Cleveland from September 28 to October 2 presents more than one subject that should be of interest to men in pulp and paper industry. Indeed, when we consider that there are to be 450 addresses delivered at 87 sessions, it would be difficult to name any industry whose factors will not find something pertinent to their own particular line at this coming convention.

There are companies in pulp and paper industry that have made splendid accident prevention records. All of these firms are unanimous in declaring that much of their successful work has been due to the information obtained at previous safety congresses. Even the concerns with the best methods admit that they have no monopoly on ideas and that they can still learn more about safety work from people in the same line.

Competition should be forgotten in safety work. In this field all of us have a common problem. All of us should be glad to see even our most bitter competitor adopt our favorite methods if they will conserve lives and limbs.

While educational programs and safety devices will reduce accidents and these two preventatives are the big considerations to be presented at the Cleveland Congress, intelligent safety work is more complex than it appears to be. This movement is a comparatively new one and all of us are anxious to learn of latest developments. That is why a great gathering is held every year. At this coming convention men from every industry will tell their competitors freely and frankly how they have reduced accidents in their plants, their workshops and their factories. This is the kind of intelligent co-operation that is needed in every industry.

It is not necessary to be a member of the National Safety Council in order to attend the meetings. While invitations have been sent to 25,000 public utilities, corporations and individuals, everyone will be welcome.

It is with interest we note the recent statement issued by W. H. Cameron, managing director of the National Safety Council, to the effect that since the inception of that organization the lives of more than 231,000 persons have been conserved as a result of the introduction of educational methods and safety devices designed to prevent accidents. Although pointing with pride to this remarkable achievement, Mr. Cameron laments that last year 85,000 Amer-

icans, men, women and children, were killed upon our streets, in our homes and while at work.

That at least 65,000 of these victims of accidents would be alive today if more people had shown a real interest in the safety movement, is the declaration of the council's executive. He lays stress on the fact that accidents do not just happen but are due to definite causes. Remove these causes and the results are eliminated, points out the safety leader. According to Mr. Cameron, about 90 per cent of all accidents can be avoided through the introduction of educational methods and safety devices. These statements are supported by statistics kept by public utilities, corporations and firms engaged in accident prevention work who have kept careful check of the number of fatalities that occurred both before and after the institution of safety campaigns.

The lack of universal interest in safety work is attributed to the fact that while the industrial costs of accidents total billions of dollars yearly they are spread over thousands of plants so that the price the individual owner of a plant pays is comparatively small when considered with the gross amount of business done during a year.

There are entirely too many employers, however, who forget the humanitarian angle of the safety movement and take into consideration only their own small financial losses. It must be remembered that our people are our greatest asset and should give greater thought to the conservation of lives and limbs than we do to the maintaining of our buildings, our machinery and our products.

Last year's toll of 85,000 lives lost in accidents is a blot upon our national escutcheon.

Woman Artist is Paper Maker

APPLETON, Wis., September 16, 1925.—To an ever growing group of artists and engravers, the Fox River valley means not the place where thousands of tons of paper of all kinds are manufactured daily but the place where Georgia Wheaton, their fellow craftsman, is constantly experimenting to make by hand a paper which will add to the beauty of their colorful block prints and their delicate etchings, says the *Milwaukee Journal.* In her basement laboratory-studio, filled with examples of various kinds of prints on her paper, Mrs. Wheaton strives to reproduce the beauty of the early paper craftsman.

As one might expect of a member of the Chicago Art Guild and the Arts and Crafts Guild of southern California, Mrs. Wheaton became interested in the manufacture of paper several years ago when she began to put into package form beautiful stationery for the linings of whose envelopes she sent to all parts of the world. Some of the writing paper and the outside of envelopes was manufactured in mills in Appleton and vicinity but the bizarre linings for the envelopes came from every locality where beautiful paper is manufactured and sold.

As people began to learn of this attractive writing paper, with its interesting wrapper with its hand painted decoration, Mrs. Wheaton turned her studio with its bright orange colored walls into a laboratory, equipped with miniature paper making apparatus, including a small beater which processes just one pound of pulp at a time.

Several of Mrs. Wheaton's "discoveries" have come with the assistance of men from the various mills and factories. In comparison with the huge machines with which they work, Mrs. Wheaton's equipment is but a plaything, but there is something about her product and the atmosphere in which it is produced that provokes the experimental turn of mind of these practical men.

"What I want is an individual watermark for the stationery of each person who wants it," said Mrs. Wheaton as she dexterously demonstrated how hand-made paper is produced. "Toward that end I am always working. Just to see how it would work out, I had my own watermark made, using my sign of the Zodiac and the date. When I learn the best way to get that mark into the paper, then the development of watermarks will be easy and I can produce the kind which each person wants to claim for his own mark."

During the summer, Mrs. Wheaton takes a vacation from her art, but already a stack of cards is beginning to grow in preparation for the demand for Christmas cards. Several artists used Mrs. Wheaton's paper last year on which to develop individual cards for their patrons. At present, the time of the owner of the tiniest paper "mill" in Wisconsin is taken with experimenting to produce a blue sheet large enough for the block prints of one artist who develops all of his blocks to be used with a blue background. The making of colors which will not fade is one of the big problems of paper making, but Mrs. Wheaton has been able to achieve some remarkable results by using surprisingly simple methods.

Power Developments Projected in New York

[FROM OUR REGULAR CORRESPONDENT]

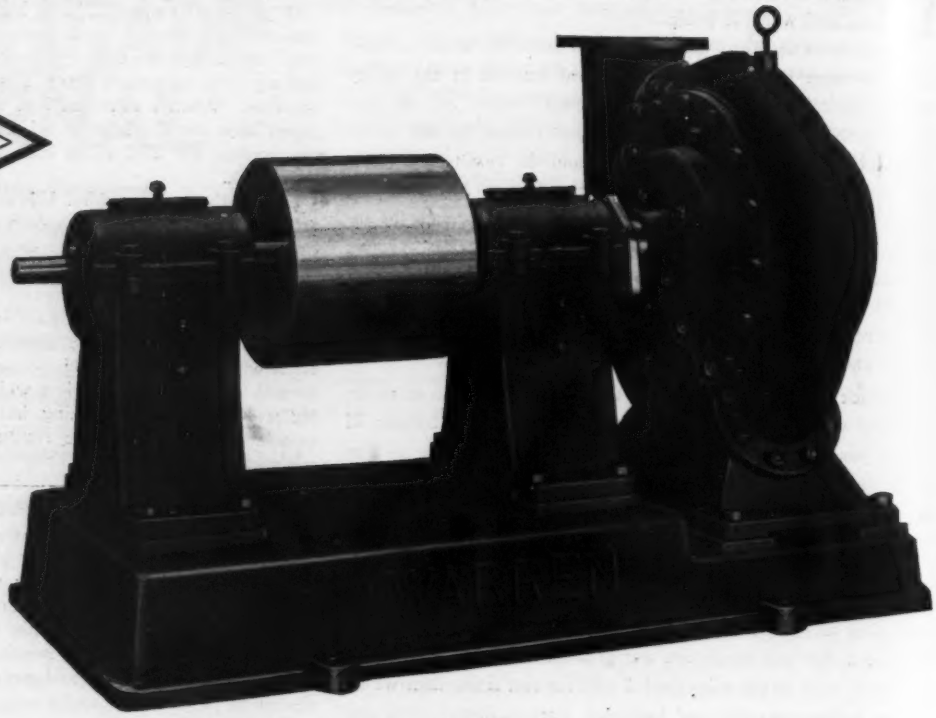
GLENS FALLS, N. Y., September 14, 1925.—The number of power development projects now under way or planned by pulp and paper firms in this section is holding the interest of the pulp and paper industry up-State. Within the next year it is predicted that additional horse power, running into hundreds of thousands, will be available to pulp and paper concerns through the completion of projects now under way. It is expected that the next few months will see the completion of plans by the International Paper Company for the development of the power sites at King's Park, the power to be generated here, it is understood, to be sold to the Northern New York Utilities Corporation.

In this section one of the principal projects under way is that of the J. & J. Rodgers Company, of Ausable Forks, which has had plans prepared for the erection of two additional dams in the Ausable River. Work has already been started on one dam and the other will soon be under construction. These dams, together with an additional power house, will give the J. & J. Rodgers Company a large increase in available power.

Another large project is planned in the vicinity of Ballston Spa by the Utilities Power and Paper Corporation and will cost, if carried through, in the vicinity of $700,000. This corporation already owns the former National Paper Mill in Ballston and plans to erect two additional dams which would generate sufficient power to serve all paper mills in Rock City Falls and Ballston. Other pulp and paper concerns which are reported to be planning additional dams or enlargements of present structures are the International Paper Company and the Union Bag and Paper Corporation. The latter corporation will expend approximately $4,000,000 in developing surplus power now going to waste at its plants along the Upper Hudson River. A number of other paper concerns are only awaiting the completion of the Conklingville dam before putting into effect power development plans.

The type of dams being constructed in the Upper Hudson depends upon the formation of the river bed. Where there is a rock base as at many points in the upper river the hollow dam is being used. This type of dam is not common athough there are one or two already constructed in this region, one of these being the Sherman Island dam at Sherman Island, erected by the International Paper Company two years ago. Another is on the property of the American Paper Board Company, of Thomson. The latter is declared to have been the first dam of the hollow arch type constructed in America. This dam was built in 1908 on the Battenkill, one of the tributaries of the Hudson near Schuylerville, and is 100 feet, with a chamber between the dam wall and the apron.

WARREN



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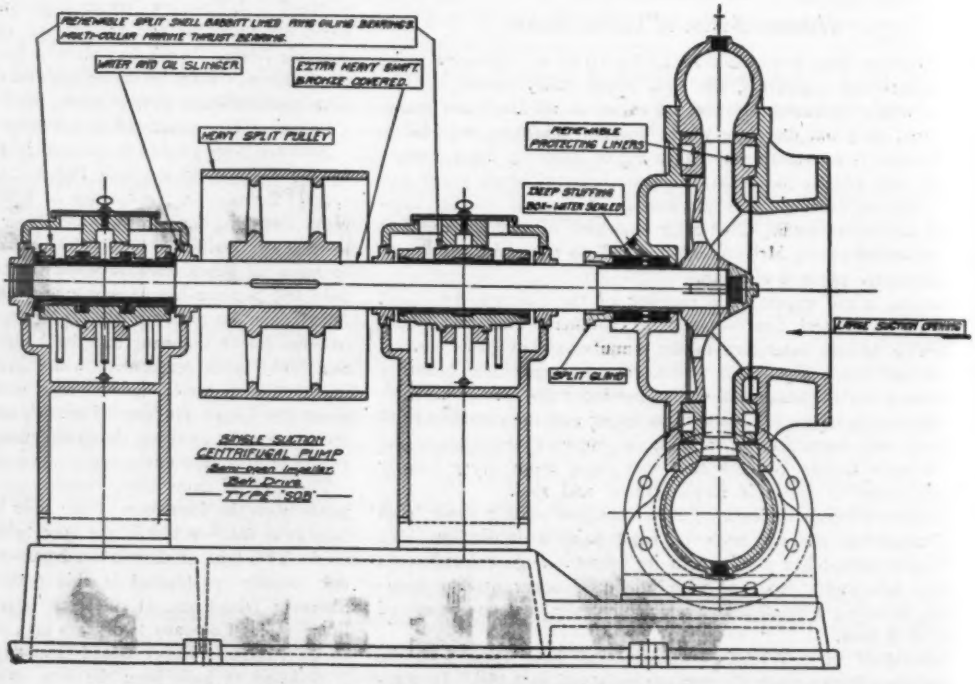

WARREN STEAM PUMP CO., Warren, Mass.

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Section of the

Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W.G. MacNAUGHTON, Secretary

Bandless Beater Roll and Bar

Frank B. Dilts, assignor to the Dilts Machine Works, Inc., Fulton, N. Y., on August 18, was granted U. S. Patent No. 1,550,517 on a bandless beater roll. The inventor describes his invention as follows:

This invention relates to a beater roll for "beater engines" of the class set forth in my pending application, Serial No. 710,588, filed May 2, 1924, adapted to be used for reducing paper stock to the desired consistency for manufacture into paper and refers more particularly to the construction of the fly bars and supporting drum therefor and other means for securing the fly bars to the drum.

In machines of this character the beater roll and especially the fly bars are subjected to severe strains resulting in more or less frequent breakage or other impairment of the fly bars which, of course, necessitates as frequent replacements.

These bars are usually secured in suitable slots in the periphery of the drum in such manner that any one of them may be removed and replaced without disturbing the remaining bars, but under the practice most commonly employed the bars must be arranged with certain impact sides facing in the same direction of rotation so that when replaced care must be taken to maintain this relation as otherwise a reversal of the bars end for end in the slots and the drum would cause irregular spacing and angular disposition of the impact faces and one of the main objects of the present invention is to provide a fly bar which may be reversed end for end in any one of the slots of the drum and to secure the bars in said slots in such manner that each bar will form opposite outwardly-convergent impact faces at equal angles to a radial plane passing through the cutting edge of the bar.

In other words, I have sought to provide a fly bar of maximum strength and durability with opposed outwardly-convergent impact faces which, when placed in operative position on the drum, will be disposed at equal angles to a radial plane passing through the cutting edges of the bars so that the bars may be reversed end for end in their respective slots without varying the angle of impact or otherwise varying the uniform spacing of the cutting edges of the bars.

Another object is to provide simple and efficient means for reinforcing or bracing the bars against excessive vibration and thereby to increase the durability and working efficiency of the beater roll as a whole.

Other objects and uses relating to specific parts of the device will be brought out in the following description.

In the drawings:

Fig. 1 is a face view partly in section of a beater roll embodying the features of my invention.

Fig. 2 is an end view, partly in section, of the same beater roll.

Fig. 3 is an enlarged perspective view of a fragmentary portion of the beater roll showing the manner of securing one end of a fly bar in one of the end heads of the beater roll.

Fig. 4 is a perspective view of one of the wedges used for tightening the fly bar in the slots in the heads.

Fig. 5 is an enlarged perspective view of portions of the heads of the drum and some of the fly bars of the beater roll showing the manner of mounting the same in the slots and for stiffening or reinforcing the portions of the bars between the heads.

Fig. 6 is an enlarged transverse, sectional view of one of the fly bars and adjacent portion of one of the heads showing the wedges in operative position for holding the fly bar in its slot against displacement.

Fig. 7 is a top plan of a small portion of one of the end heads of the drum showing the adjacent end of one of the fly bars operatively secured in its corresponding slot in said head.

Fig. 8 is a perspective view of one of the supplemental wedges for securing the fly bar in place.

As illustrated this beater roll comprises opposite end heads (1) and intermediate heads (2) of substantially the same diameter and secured in axially spaced relation and co-axially upon a revoluble supporting shaft (3), the heads (1 and 2) being provided with peripheral slots (4 and 5) which are arranged in uniformly spaced relation circumferentially so that the slots of each head will be in axial alignment with those of the other heads for receiving a corresponding number of fly bar (6) and wedges (7 and 7').

The outer end walls of the slots (4) in the ends (1) are preferably closed to form end thrust abutments and peripheral bearings (8) for the adjacent ends of the fly bars while the slots (5) in the intermediate heads (2) extend from end to end of the peripheral faces thereof, said heads being provided with annular flanges or bearings (9) at the bases of the slots (4) and (5) to form additional support for the inner edges of adjacent portions of the fly bars.

These fly bars are of uniform size and form and are of approximately twice the radial depth of the corresponding depth of the slot in which they are seated so that when placed in operative position approximately half of the radial width extends beyond the periphery of the drum heads (1 and 2) for cutting co-action with a suitable bed plate, not shown, but commonly used in beating engines of this type.

The outwardly projecting portion of each fly bar (6) is provided with outwardly converging impact faces (10) forming opposite equal angles with a medial radial line or plane (a) passing through the center of the cutting edge as (6') of the bar which allows said bar to be reversed end for end in its receiving slots without altering the angle of the impact face or varying the uniform spacing of the cutting edges (6') of the fly bars.

One side of the inner half of each bar is provided with a lengthwise recess (11) extending from end to end thereof and forming at the inner end of the recess a lengthwise rib (12) for a purpose presently described, the opposite side of the inner half of each bar being preferably disposed in the same plane as the corresponding impact face (10).

The slots (4 and 5) of the heads (1 and 2) are dovetailed radially and tapered axially so that the opposite side walls of each slot converge outwardly and also axially, the open outer ends of said slots being of just sufficient width to permit the inner edges to be easily inserted and removed radially thereinto and therefrom while the portions of the heads at opposite sides of the slots form abutments to hold the bars against relative circumferential movement, the side walls of the slots of the end heads being preferably convergent outwardly while the side walls of the intermediate heads may converge axially in either direction.

The inner portions of the bars (6) extend the entire distance between the end walls of the slots (4) in the end heads (1) and abut against the said end walls while their inner edges rest upon the annular flanges (9), the outer portions of said bars being extended beyond the inner faces of the end wall of the slots (4) of the end heads (1) to overhang the peripheral bearings (8) and preferably terminate in planes co-incident with the outer end faces of the end heads to act full length upon the stock.

The back wall of the recess (11) of each bar (6) is substantially flat and extends inwardly from the inner edge of the corresponding impact face (10) at a convergent angle to the opposite face or diagonally across the medial line (a) so as to maintain a maximum thickness of the bar at the inner edges of the impact faces for stiffening purposes, the rib (12) at the inner edge of each bar being of sufficient width to extend beyond the medial line (a) which therefore passes through the rib.

When the upright bars are properly seated in their respective slots (4 and 5) they are tightly secured therein by the wedges (7 and 7') which are driven in place by any suitable tool, the wedge (7) being tapered transversely and also axially to conform approximately to be bevel faces (11) and opposite walls of the slots while the wedges (7') are relatively thin but conform to the bevels of the opposite faces of the slots and adjacent sides of the fly bars.

The wedges (7) when driven in place not only tightens the inner portions of the fly bars against the opposite walls of the slots but also engage the outer faces of the ribs (12) to force the inner edges of the fly bars tightly against the outer faces of the bars (9).

Suitable filler pieces (13) preferably of wood or equivalent water absorbing material are interposed between adjacent faces of the inner portions of the fly bars and between the heads (1 and 2) so as to rest upon the flanges (9) and to abut against the end faces of the portions of the heads between the slots while their side faces are adapted to impinge against the adjacent faces of the fly bars for reinforcing or bracing the latter against excessive vibration, particularly at points between the heads.

These filler pieces (13) are preferably divided longitudinally and beveled to form opposite wedge-shaped sections (14 and 14'), one section of each filler piece being provided with a lengthwise groove (15) adapted to receive the adjacent flange (12) of the fly bar which, in turn, serves to hold the filler piece against radial displacement.

When the filler pieces (13) are placed in operative position the

FIG. 1.

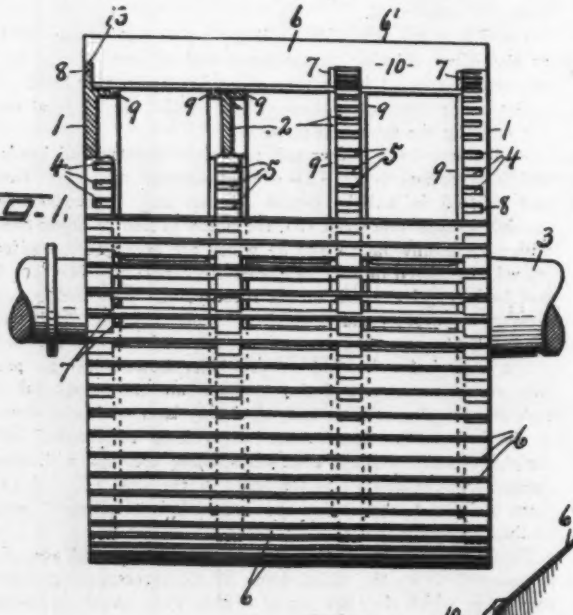

FIG. 2.

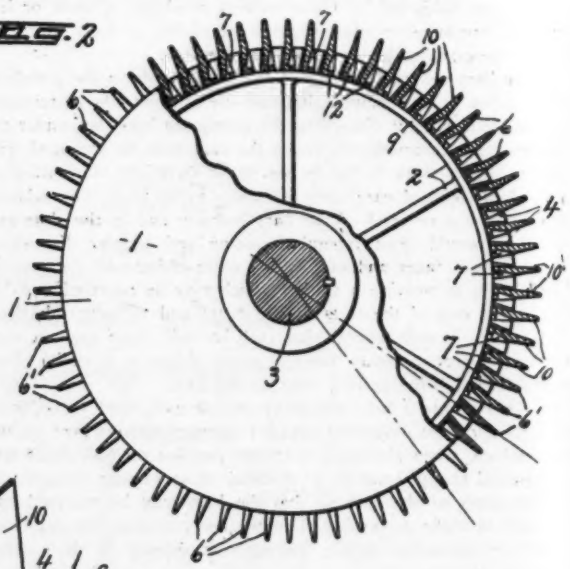

FIG. 3.

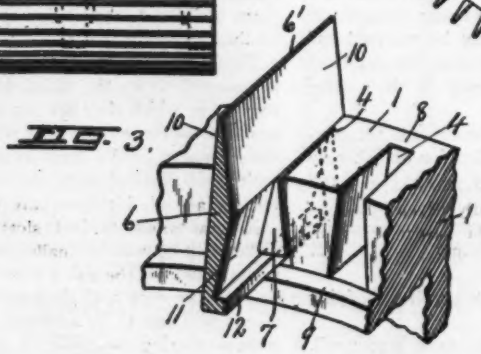

FIG. 4.

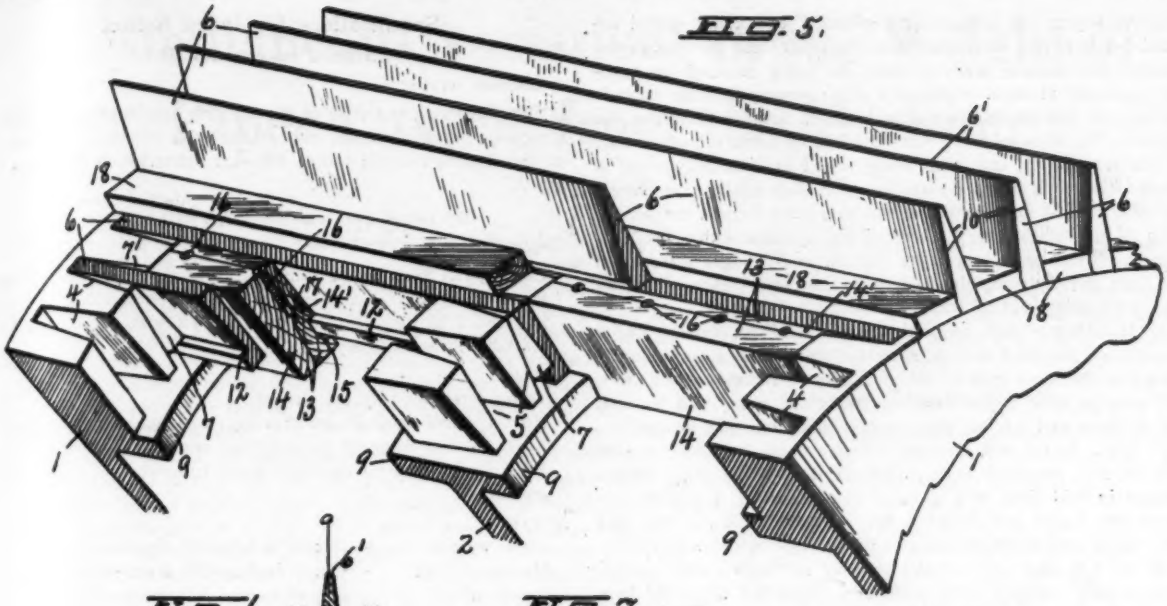

FIG. 5.

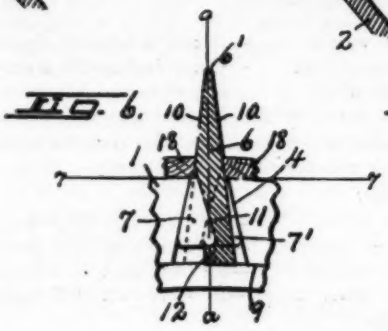

FIG. 6.

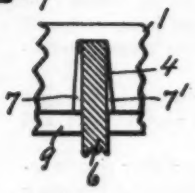

FIG. 7

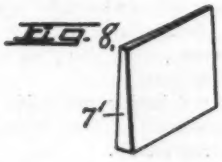

FIG. 8.

opposite sections (14 and 14') of each filler piece are secured in place by screws (16) which are inserted in the joints from the outer faces of said filler pieces for locking the two sections together and pressing them firmly against the adjacent faces of opposed fly bars against centrifugal displacement.

If desired, the adjacent faces of the filler piece sections (14 and 14') may be provided with tongue and groove connections (17) for additionally holding them against relative radial displacement.

When the filler pieces are placed in operative position their outer edges may be covered by additional reinforcing strips (18) of wood or equivalent material placed between the inner edges of adjacent impact faces (10) and suitably secured by screws or other fastening means to the filler pieces (13) for additionally bracing the fly bars against inward lateral vibration.

The operation of the beater roll will now be readily understood upon reference to the foregoing description and the accompanying drawing from which it is evident that any one of the fly bars (6) may be reversed end for end and secured in operative position without displacing any of the other bars and without altering the angle of the impact faces relatively to the medial line (a) and without varying the uniformly spaced relation of the cutting edges as (6').

What I claim is:

1. A flatbar for beater rolls having one side flat and its other side beveled transversely in opposite directions from a medial lengthwise line, said flat side and the outwardly beveled half of the opposite side forming equal angles with the base of the bar.

2. A fly bar for beater rolls having one side flat and its other side beveled transversely in opposite directions from a medial lengthwise line, said flat side and the outwardly beveled half of the opposite side forming equal angles with the base of the bar, the opposite ends of the outer half of the bar being extended beyond the corresponding ends of the inner half of said bar for the purpose specified.

3. A beater roll having peripheral slots, each slot having its opposite walls converging axially at equal angles to a medial plane passing through the axle of the roll, and fly bars secured in said slots.

4. A beater roll comprising a drum having a circumferential series of axially tapered dovetailed slots, the opposite walls of each slot disposed on opposite sides and at equal angles to a plane passing through the axis of the roll, in combination with fly bars seated in the slots and projecting beyond the peripheries of the heads and wedges inserted between one of the walls of the slot and adjacent faces of the fly bars for holding said fly bars in the slots.

5. In a beater roll, axially spaced co-axial end heads having peripheral axially alined slots each dovetailed radially and its walls tapered longitudinally at equal angles to a medial plane passing through the axis of the roll.

6. A beater roll comprising a plurality of axially spaced co-axial heads having alined dove-tailed slots opening from the peripheries thereof, the outer ends of the slots of the end heads being closed to form end bearings for the fly bars, in combination with fly bars inserted in said slots and projecting beyond the peripheries of the heads and having their ends overlying the peripheral end faces of said bearings, and wedges inserted in the slots for locking the bars in the slots.

7. In a beater roll, axially spaced co-axial end heads having peripheral axially alined slots each dovetailed radially and its walls tapered longitudinally at equal angles to a medial plane passing through the axis of the roll, and fly-bars secured in their respective slots and each provided with outwardly converging impact faces at equal angles to the corresponding dovetailed walls of the slots.

8. A beater roll comprising a plurality of axially spaced coaxial heads having dovetailed slots opening from the peripheries thereof, the opposite walls of each slot being disposed on opposite sides and at equal angles to a plane passing through the axis of the roll, said heads being provided with annular flanges at the bases of the slots to form seats for the fly bars, the outer ends of the slots of the end heads being closed to form abutments, in combination with fly bars seated in said slots against the flanges and also against said abutments and projecting beyond the peripheries of the heads, the portions of the fly bars within the slots being provided with lengthwise flanges, and wedges inserted in the slots and engaging the flanges and adjacent faces of the fly bars for locking said fly bars to the heads.

9. In a beater roll, co-axial cylinder heads in axially spaced relation and provided with peripheral dove-tailed slots and annular flanges at the inner ends of the slots, flybars secured in said slots, and wooden filler pieces wholly between the heads and between the fly bars and having their ends resting on said flanges.

10. In a beater roll, co-axial cylinder heads in axially spaced relation and provided with peripheral dove-tailed slots, flybars secured in said slots, and wooden filler pieces in the spaces between the heads and between the fly bars, said fly-bars and filler pieces having tongue and groove interlocking connections.

11. In a beater roll, co-axial cylinder heads in axially spaced relation and provided with peripheral dovetailed slots, fly bars secured in said slots, and wooden filler pieces wholly between the heads and between the fly bars, said filler pieces being composed of sections, and means for spreading the sections against the adjacent faces of the fly bars.

12. In a beater roll having removable fly-bars, a filler piece composed of wedge-shaped sections arranged face to face and relatively adjusted transversely.

13. In a beater roll having removable fly-bars, a filler piece composed of sections arranged face to face and means for spreading said sections apart.

14. In a beater roll having removable fly bars, a filler piece composed of sections arranged face to face and means for spreading said sections apart, one of said sections being provided with a lengthwise groove in one side for receiving a portion of the adjacent fly bar.

International Brotherhood Prepares for Election

ALBANY, N. Y., September 14, 1925.—All ballots to be used in the October election of the International Brotherhood of Papermakers will be in the hands of local unions this week. About seven thousand ballots have been sent out of headquarters in this city by registered mail. Ballots to be used by the local in Newfoundland and throughout Canada were mailed first. It is mandatory upon each local to return to this city the ballots cast in the election within twenty-four hours of the closing of the polls. Ballots bearing a postmark within that time will be accepted upon reaching here.

The board of canvassers of the Brotherhood will convene in this city about October 20, according to present plans. The board this year is composed of Charles Keyes, of Thorold, Ont.; William Schackett, of Troy, and Adolph Gauthier, of Niagara Falls. This board will probably be in session for a week canvassing the vote as cast and rendering its report.

Rates on Pulp Found Unreasonable

WASHINGTON, D. C., September 16, 1925.—The rate on imported wood pulp in carloads from Boston to Ondawa, N. Y., have been found unreasonable by the Interstate Commerce Commission and reparation has been awarded. The present rates on imported wood pulp from and to the same points have not been found unreasonable.

This decision was rendered by the Commission in the case of the Stevens & Thompson Paper Company against the Boston & Maine Railroad.

TECHNICAL SECTION, PAGE 114

Specifications for Index Bristol

SPECIAL INQUIRY NO. 32

A member writes:

"The following is a copy of the tentative specifications for Index Bristol on which I would like to have the opinions of members of the Association and others who are interested in this class of paper.

TENTATIVE SPECIFICATIONS FOR INDEX BRISTOL

General:

Card stocks shall be of single ply type and available in three grades designated No. 0—No. 1—No. 2. Grades No. 0, No. 1 and No. 2 in light—medium and heavyweight. No. 0 shall be available in extra heavy weight.

Grades:

To be determined by the furnish.

No. 0 not less than—75 per cent rag; remainder—chemical wood

No. 1 not less than—50 per cent rag; remainder—chemical wood

No. 2 to be made of chemical wood (groundwood shall not be present).

Weight:

Light weight	—25 x 40 inches—500 sheets—140 pounds
Medium weight	—25 x 40 inches—500 sheets—180 pounds
Heavy weight	—25 x 40 inches—500 sheets—220 pounds
Extra heavy weight	—25 x 40 inches—500 sheets—280 pounds

Variation of not more than 5 per cent plus or minus from these weights will constitute good delivery.

Thickness:

Light weight	—not more than 0.009 inches
Medium weight	—not more than 0.012 inches
Heavy weight	—not more than 0.015 inches
Extra heavy weight	—not more than 0.018 inches

Strength:

Minimum "Mullen" bursting strength (points):

Grade	Light Weight	Medium Weight	Heavy Weight	Extra Heavy Weight
No. 0	70	90	110	140
No. 1	60	75	90	
No. 2	50	65	75	

Finish:

Shall be of such finish as to be suitable for both pencil and ink writing. Deliveries must conform to accepted sample.

Sizing:

Shall be suitably sized for ink writing before and after erasure. Deliveries must conform to accepted sample.

Colors:

Standard colors—white, buff, blue and salmon must conform to accepted samples.

"Aside from the specific and constructive criticism of the specifications as a whole, information is particularly desired on three rather definite points:

"1. Should the thicknesses be limited in the specification without any tolerance as they are given or should other figures be given and tolerance allowed? For instance, in the light weight, should a thickness of 0.0085 inches with a tolerance of 5 per cent be stated, or 0.009 with no tolerance? Similar remarks are applicable to the minimum 'Mullen.'

"2. Should a stiffness test be introduced similar to that described by Bragg in 'Paperboard and Its Manufacture' in *Paper* 35, No. 5 (November 20, 1924)?

"3. Are there any other tests to be recommended, as for instance the tearing test?"

Letters discussing this inquiry should be sent promptly to W. G. MacNaughton, Secretary, TAPPI, 18 East Forty-first Street, New York. A transcript of the replies, in blank, will be sent to all who contribute to the discussion.

Instantaneous Variations in the Weight of Paper Coming from the Machine*

By H. Micoud

This somewhat indefinite and high-sounding title will doubtless cause the reader to expect a complicated mathematical treatment with imposing and frequently recurring integrals; but he may rest assured that the few remarks which we shall make will be quite simple and can easily be followed without any knowledge of higher mathematics. As a rule titles are chosen as brief as possible, and the reason for our adopting this one is that we found no better one, and that it is quite accurate and expressive when its meaning has been explained.

When a roll is taken off the winder at the end of the machine in order to be rewound, a strip *a b c d* is taken off the full width of the sheet and of suitable length. This strip is cut into small squares (or rectangles) *a' b' c' d'*, which are all exactly the same size, and each square is then carefully weighed (Fig. 1). When all the weights have been obtained they are compared longitudinally and transversely and the corresponding curves are constructed to allow of drawing conclusions more readily.

The investigation of these variations does not require any knowledge of differentials or integrals. The only things needed are good scales, and plenty of patience, for each paper examined involves between two and three hundred accurate weighings.

We examined in this way two grades of paper, as follows:

1) A white Bristol board, nominal weight about 300 grams per square meter,
2) A butchers' manila, weighing about 120 grams per square meter.

White Bristol

This was a high grade Bristol, 2 meters wide, manufactured on

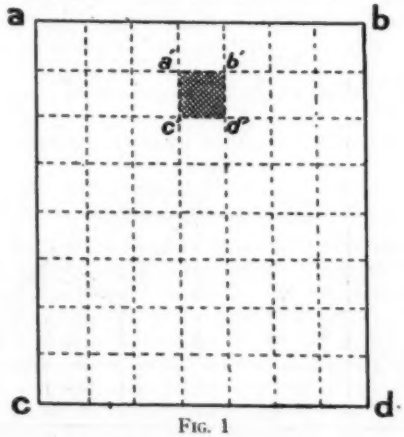

Fig. 1

a cylinder machine, and a length of 1.60 meters was taken for the investigation.

Before cutting up, the sheet was properly marked so that the position of each little square could be identified after cutting. Each longitudinal strip was given a letter and each transverse strip was given a number, so that each square was designated by means of a letter and a number, such as B2, E4, G5, etc.

The sheet measuring 2 meters by 1.6 meters was then cut by means of hand shears into 25 strips measuring 1.6 x 0.08 meters, and each of these in turn was divided into 20 squares approximately 0.08 x 0.08 meters. These little squares were all piled up and trimmed together to squares 75 x 75 mm. A new blade was used in the trimmer, and there was no chattering, as shown by the fact that the sides of the pile of trimmed squares were perfectly smooth. All the squares can therefore be considered as being of exactly the same area, so that the actual area can be disregarded completely in comparing the weights.

First Experiment

We first weighed all the squares from four consecutive transverse strips, and obtained the following figures, the weights being expressed in centigrams.

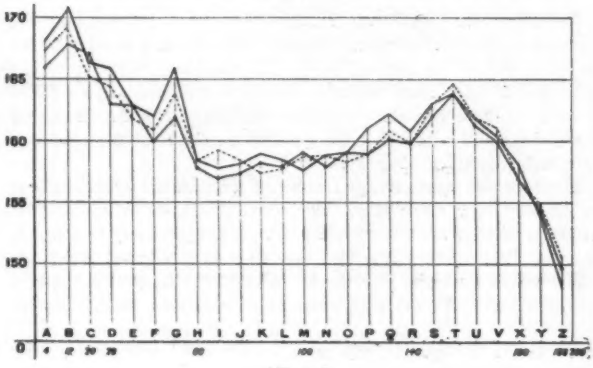

Fig. 2

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	168.0	170.9	166.5	166.0	162.9	162.0	166.0	158.6	157.9	158.2	159.0	158.5	157.8
2	167.3	169.2	165.1	164.5	161.9	161.0	163.9	158.5	159.2	158.6	157.5	157.9	158.8
3	166.0	167.8	167.0	163.0	163.0	160.0	164.0	157.9	157.2	157.5	158.3	158.0	159.2
4	165.5	168.5	165.1	164.5	163.0	159.0	162.0	156.5	155.0	155.8	156.0	155.0	156.5

	N	O	P	Q	R	S	T	U	V	X	Y	Z
1	159.0	159.2	161.0	162.2	161.0	163.0	164.0	162.0	160.7	158.2	154.0	148.3
2	159.0	158.5	159.5	160.9	160.0	162.9	164.8	162.0	161.2	157.1	155.0	150.8
3	158.0	159.1	159.0	160.2	160.0	162.0	164.0	161.5	160.0	157.0	154.8	150.0
4	155.0	157.2	158.0	159.2	158.8	161.0	163.5	162.0	161.2	159.1	155.2	148.4

The next step was to plot the results for each strip, taking the distance of the center of the square from the left hand edge of the sheet as abscissa and the weight of the square as ordinate. This gave us the three curves shown in Fig. 2 for strips 1, 2, 3. We did not plot the curve for strip 4, as it would have been confusing, but it shows the same general trend as the other three.

The greatest variation in weight in the strip showing the greatest differences (strip No. 1) was from a maximum of 170.9 to a minimum of 148.3, a difference of 22.6 centigrams. The average weight of the squares on this strip is 161.0 cg., so that the maximum variation in weight is equal to $\frac{22.6}{161} = 14$ per cent of the average.

Examination of these curves (Fig. 2) shows great uniformity in the variations in weight across the sheet. Starting from the left, the weight rises at first (strip B), decreases fairly rapidly, rises suddenly at strip G and falls just as suddenly, remains fairly constant toward the center of the sheet, rises gradually to strip T, and thereafter falls rapidly to the edge of the sheet.

Second Experiment

We then extended our weighings to the whole sheet; but as our purpose was chiefly to study the longitudinal variations in weight

* Translated from *Le Papier* xxvii, 1357-1366, December, 1924, by A. Papineau-Coutre.

we weighed only every second square in each transverse strip, and we calculated the longitudinal averages in order to be able to construct the mean transverse curve.

	A	C	E	G	I	K	M	O	Q	S	U	X	Z
1	168.0	166.5	162.9	166.0	157.9	159.0	157.8	159.2	162.2	163.0	162.0	158.2	148.3
2	167.3	165.1	161.9	163.9	159.2	157.5	158.8	158.5	160.9	162.9	162.0	157.1	150.8
3	166.0	167.0	163.0	164.0	157.2	158.3	159.2	159.1	160.2	162.0	161.5	157.0	150.0
4	165.5	165.1	163.0	162.0	155.0	156.0	156.5	157.2	159.2	161.0	162.0	159.1	148.4
5	166.9	168.0	164.5	164.8	156.1	156.1	156.1	159.4	160.0	163.0	162.9	158.4	148.0
6	166.5	167.0	162.4	162.0	156.0	157.3	156.9	158.5	159.1	162.5	163.0	158.8	147.0
7	166.0	167.2	162.0	163.8	156.2	155.1	157.3	159.0	158.7	161.5	162.0	157.9	148.5
8	167.0	167.6	163.0	162.5	156.8	157.5	156.8	158.0	157.0	161.2	162.0	160.8	147.5
9	166.0	167.8	161.5	161.5	154.0	156.9	155.5	156.9	156.2	160.0	160.4	156.2	146.0
10	168.0	167.2	164.0	163.0	155.0	157.0	156.1	158.0	157.8	160.8	162.0	159.0	148.5
11	167.0	165.5	161.8	160.5	154.6	156.0	155.3	156.0	155.4	159.4	161.0	156.0	145.5
12	166.0	167.0	161.1	160.0	152.3	155.5	154.8	156.5	156.4	159.0	160.7	156.4	145.1
13	165.5	162.5	159.1	157.8	150.8	154.8	154.0	156.2	158.0	161.1	161.6	155.0	144.2
14	166.9	164.4	162.0	159.6	153.2	156.2	154.5	157.9	157.5	160.1	161.6	156.3	145.0
15	167.5	167.0	161.8	159.7	153.0	156.8	156.1	157.0	158.3	162.0	163.2	155.2	144.0
16	167.8	167.2	161.5	162.0	152.8	156.4	156.0	158.4	157.0	161.0	163.6	155.0	144.8
17	167.2	166.0	161.0	159.1	152.5	156.1	155.5	156.9	157.2	160.2	161.5	152.0	142.0
18	166.5	155.0	151.4	159.0	153.0	153.8	153.5	156.0	156.7	160.0	160.8	154.6	143.0
19	168.0	166.2	159.9	160.1	153.9	156.9	155.2	157.5	158.0	161.8	162.2	155.2	143.6
20	167.0	168.5	163.9	161.0	154.2	156.0	155.8	158.0	158.2	162.8	164.5	154.0	142.0
Av.	166.8	166.4	162.1	161.6	154.6	156.4	156.0	157.7	158.2	161.2	162.0	156.6	146.1

Transverse Variation

As before, we plotted the results for each strip by taking the distance of the center of the square from the left hand edge of the sheet as abscissa and the weight of the square as ordinate. In order not to overcrowd the figure we give only two curves taken at random, those for strips 6 and 18, and also the mean curve, but it will be readily seen that the general trend of all the others is practically the same (Fig. 3).

These results confirm the results of experiment 1 carried out on the first four strips only. The curve gradually falls from the left hand edge of the sheet to strip I, rises progressively to strip U, and then falls off very sharply to the right hand edge of the sheet.

The extreme weights for the strips showing the greatest difference (strip No. 20) are maximum 168.5, minimum 142.0, a difference of 26.5 centigrams, which is $\frac{26.5}{159} = 16.7$ per cent of the average weight of the strip.

Longitudinal Variations

In order to study the longitudinal variations, we plotted the results by taking the distance of the center of the square from the upper edge of the sheet as abscissa and the weight of the square as ordinate, and we obtained the curves shown herewith (Fig. 4) for strips A, G and M.

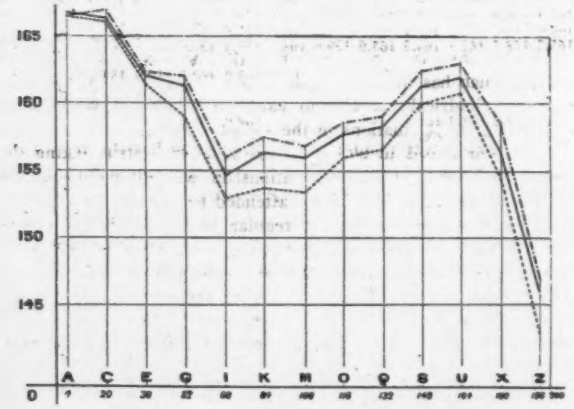

FIG. 3

The figure brings out quite clearly that the longitudinal variations in the various strips are most irregular, and no definite general trend is apparent, the nearest approach to it being that all three curves show a depression in the neighborhood of strips 12, 13 and 14. On the other hand it frequently happens that the curves show opposite tendencies at the same points, as, for instance, at 1, 8, 10, 16, etc.

The maximum variation in the strip showing the greatest extremes in weight (strip No. 1) is from 159.2 to 150.8, difference of 8.4 centigrams, equivalent to $\frac{8.4}{154} = 5$ per cent on the average weight of the strip.

Conclusions

These two tests on white bristol board lead to the following conclusions:

1) The variations across the width of the sheet are quite regular;
2) The variations in weight of the various longitudinal strips show no regularity whatsoever;

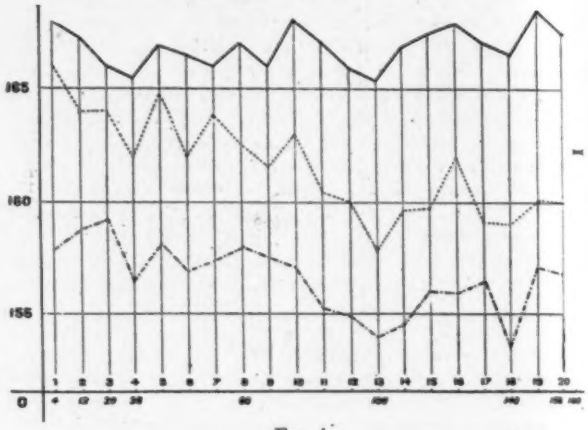

FIG. 4

3) There is a very considerable difference between the maximum and minimum weights of the respective transverse strips;
4) There is a relatively small difference between the maximum and minimum weights of the respective longitudinal strips.

We shall have occasion to discuss these last two conclusions more fully in our general conclusions. For the present we shall merely draw attention to the fact that the variations in transverse weight go as high as 16.7 per cent of the mean weight, while the longitudinal variations do not exceed 5 per cent.

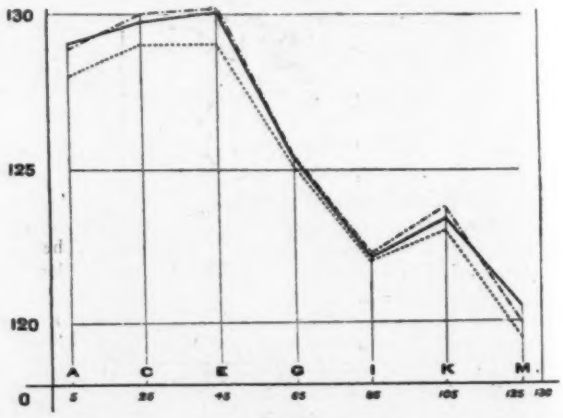

FIG. 5

Butchers' Manila

This was an average quality paper, made on a 1.4 meter fourdrinier machine. The sheet tested measured 140 by 350 centimeters, and weighed approximately 120 grams per square meter. The strips were marked and cut as in the case of the bristol, and gave 35 transverse strips, which were divided into 13 squares hav-

ing a 10 cm. side; and, just as in the second test described above, we weighed every second square of each transverse strip.

The following table gives the results obtained, in centigrams, and also the average weight of each longitudinal strip.

	A	C	E	G	I	K	M
1	128.0	129.0	129.0	125.1	122.0	123.0	119.5
2	129.0	129.9	130.5	126.5	122.1	123.4	119.0
3	128.2	129.9	131.1	125.0	120.5	121.9	121.1
4	128.8	129.0	130.1	126.0	121.6	123.1	120.9
5	129.5	129.0	130.8	126.2	121.5	122.0	119.5
6	130.2	129.2	129.0	125.0	121.0	124.0	120.0
7	130.0	130.8	130.0	125.9	121.8	124.8	120.0
8	129.1	129.0	129.0	125.8	122.0	124.0	121.4
9	128.2	129.5	129.8	126.0	122.2	123.1	120.0
10	128.2	130.0	129.5	126.9	122.0	122.2	122.0
11	127.3	129.9	130.0	126.5	123.5	123.5	122.5
12	128.1	127.7	130.2	124.6	122.1	123.0	121.0
13	126.6	127.9	130.5	126.0	123.0	123.4	121.3
14	129.1	128.4	130.0	125.8	123.2	124.2	120.9
15	128.1	128.1	130.6	126.0	122.5	123.0	120.8
16	128.1	128.7	130.7	125.9	121.5	123.1	119.0
17	130.9	130.9	130.9	127.2	122.5	122.5	120.1
18	130.3	131.1	131.0	127.0	122.0	124.2	121.0
19	129.0	130.9	130.0	127.9	122.5	124.0	120.0
20	130.0	129.0	130.2	124.0	121.5	122.0	121.0
21	130.3	131.0	130.0	125.8	123.1	125.9	122.0
22	130.0	131.6	130.5	126.0	123.7	123.0	120.0
23	129.9	130.8	129.8	125.0	123.0	124.1	120.0
24	127.5	131.0	131.1	124.8	123.1	123.9	119.9
25	129.0	130.0	131.0	125.5	122.7	124.2	120.1
26	127.1	130.2	132.0	125.0	123.2	122.0	119.2
27	128.0	130.1	131.0	125.0	121.7	123.0	119.2
28	128.9	130.0	130.2	125.7	122.2	123.8	120.0
29	130.3	129.5	127.5	124.8	123.0	123.1	120.9
30	131.0	130.8	130.0	125.1	123.0	123.0	120.0
31	130.0	129.6	129.5	125.3	122.0	122.5	121.8
32	131.5	130.9	132.0	125.0	121.5	123.1	121.7
33	130.5	130.0	130.6	125.9	122.9	124.0	122.9
34	130.5	130.5	131.0	126.0	123.7	124.0	121.9
35	129.0	129.3	129.9	125.0	121.0	124.0	121.5
Av.	129.1	129.8	130.1	125.6	122.3	123.4	120.6

Transverse Variations

We again plotted the results for each strip by taking the distance of the center of the square from the left hand edge of the sheet as abscissa and the weight of the square as ordinate, and we obtained the curves shown in Figure 5 for two strips taken at random (Nos. 1 and 28) and for the mean curve. The general trend of the curves for the other strips is exactly the same.

Once more we observe a very great similarity in the variations of the different strips. Starting from the left hand edge of the sheet the weight rises slightly up to strip E, falls very suddenly in G and I, and after a slight rise (strip K) it continues to decrease to the right edge of the sheet.

The extreme weights of the strip (No. 27) showing the greatest divergency are: maximum 131.0, minimum 119.2, a difference of 11.8 centigrams. As the mean weight of the squares for this strip

$$\frac{11.8}{125} = 9.4$$

is 125 centigrams, the variations in this strip amount to —— = 9.4 per cent of the average weight.

Longitudinal Variations

The graphs shown in Figure 6 are constructed in the same manner as those of Figure 3. They are the curves of three strips taken at random, namely A, E, and I. The conclusion is the same as in the case of the white bristol, and the lack of regularity is even more striking in this case than in the first one.

The extreme weights of the strip (C) showing the greatest divergency are: maximum 130.9, minimum 127.7 centigrams, a difference of 3.2 centigrams, which is only 2.5 per cent of the average weight of the squares of this strip.

The conclusions to be drawn from this test are in every respect similar to those following from the test on bristol board.

General Conclusions

A study of the results obtained in the course of the examinations of these two papers leads to the following conclusions, which we have already given, and which we repeat as general conclusions:

1) The transverse variations in weight are quite regular;
2) The longitudinal variations in weight show no regularity whatsoever;
3) There is a very considerable difference between the maximum and minimum weights of the respective transverse strips;
4) There is relatively little difference between the maximum and minimum weights of the respective longitudinal strips.

Causes of the Variations in Weight

These conclusions appear quite logical. At first sight the variations in weight would seem to be due to imperfections in the paper machine table and presses, and to numerous irregular currents set up in the stock at the head of the paper machine.

The table may not be perfectly horizontal; the slices may be slightly out of parallel with the table, causing irregularities in the thickness of the sheet of stock as it is delivered on to the wire; the tension of the wire may not be uniform across the

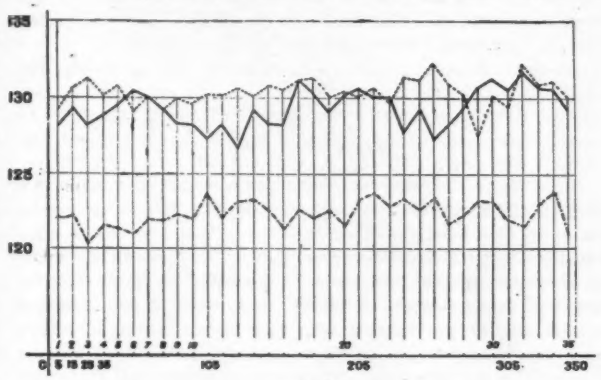

FIG. 6

whole width of the machine; the presses may be more heavily weighted at one end; there may be variations in the rate of delivery of the stock from under the last slice. These and numerous other causes can come into play.

But most of them will work chiefly to cause irregularities in the weight of the paper across the sheet, and will have but little tendency to cause longitudinal variations in the weight. If the slice is higher at the right hand side, or if a table roll is somewhat raised at its left end, the right hand side of the sheet will necessarily be thicker than the left hand side, while there will be practically no longitudinal variation in weight.

On the other hand we would be inclined to attribute the longitudinal variations to a table roll or press roll which does not turn true, or which has been damaged so that its surface is no longer perfectly cylindrical; or else to variations in the consistency of the stock; or to fluctuations in the speed of the machine, etc. But the effects produced by these factors are not so great as those which cause the transverse variations in weight, and moreover they are more easily detected and attended to than the latter. The press rolls are turned down at regular intervals, the table rolls are frequently examined to see that they turn true, and the consistency of the stock is fairly constant, especially at any two consecutive moments, all of which helps to prevent excessive longitudinal variations in the weight of the paper.

Another possible cause of both longitudinal and transverse variations are the ripples or waves at the head of the machine due to the shake and the eddies produced by improper levelling of the slices. But the irregularity of these waves, as well as the fact that they are reflected back from the deckle straps, makes it extremely difficult, not to say impossible, to determine just what their effects will be.

Suppose we have a perfect machine, with prefectly round press rolls, table rolls turning absolutely true, and an absolutely constant stock consistency, there would be nothing to cause longitudinal variations in the weight of the paper. But on the other hand, even this perfect machine could quite easily give transverse variations if the slices were not set perfectly or if the table was not absolutely level from one side to the other. And these transverse variations would remain constant as long as the adjustment of the slices or of the table was not altered. That explains the regu-

larity in transverse variations obtained even with an imperfect machine, which was very clearly brought out in Figures 1, 2 and 4.

Without going any further into the causes of the variations, we shall now discuss their magnitude and compare them with the tolerances provided for in the paper trade code.

Magnitude of the Variations in Weight

First of all, let us consider the bristol board. We are dealing with a white board of a nominal weight of 300 grams per square meter, for which the code provides for a tolerance of 8 per cent in weight over or under the nominal weights, giving a margin of 16 per cent between the maximum and minimum weights permissible (276 and 324 grams). In our first test we found a maximum transverse variation of 14 per cent, while the second test gave 16.7 per cent, which is greater than the tolerance.

This shows how dangerous it may be to take all the samples for weight from the same side of the sheet. It can very easily happen that the right hand edge of the sheet is of exactly the specified weight, while the left hand edge is so far out that it is outside the tolerance and can be rejected.

This is most strikingly illustrated in the very case that we are discussing. The theoretical weight of the 75 x 75 mm. squares is practically 168 centigrams, which is very close to the weights actually found for the square near the left hand side of the sheet. It is evident that the machine tender checked up his weight by means of samples taken on the left hand side of the sheet and thought that he was turning out paper at just the right weight, when as a matter of fact the right hand side of his sheet was not even within the tolerance. When the paper was cut, the reams from the left of the web were of the proper weight, while the ones from the right side could be rejected if the purchaser was at all fussy or nasty.

It is therefore highly advisable to check the weight of the paper by means of samples taken from both edges of the sheet, and also occasionally from the middle of the sheet (at the beginning of each roll, for instance). It is the only way in which the weight of the paper can be kept fairly uniform across the full width of the machine.

The results obtained with the butchers' manila lead us to identically the same conclusions. The tolerance in this case is 4 per cent above or under the nominal weight, making a maximum variation of 8 per cent, while we actually found transverse variations of 9.4 per cent and longitudinal variations of 2.5 per cent. Here again the transverse variations fall outside the limits tolerated by the code. The theoretical weight of the 10 x 10 cm. squares is 120 centigrams, which is exactly the average weight found along the right hand edge of the web. The machine tender certainly took his samples from this side, and never bothered about the left side which was much too heavy and fell outside the tolerance of the code.

Importance of the Variation in Weight

These variations in weight are of considerable importance in a number of paper converting processes, and the paper manufacturer certainly should give the matter serious attention.

Let us take a very simple example. Suppose we have a large roll from the machine, 140 centimeters in diameter, which is thinner at the right hand side than at the left, and that we want to slit and rewind into smaller rolls. The result is not difficult to predict: there will be plenty of breaks and of creases due to irregularities in the tension across the sheet, the left hand roll will be rewound extremely tight, while the right hand one will be so loose as to be hardly fit to use.

Again, think of all the trouble and worry which variations in the weight of the paper will cause when printing on a high speed rotary press. There will be so many diagonal creases as to make it practically impossible to turn out a clean job. And when it comes to polychrome work, how can the printer hope to get a decent register when the paper is continually "floating" or creasing?

These few examples, chosen amongst numerous others, bearing as they do on some of the most important branches of the paper converting industry, including wall paper, bag making, and printing, indicate in no uncertain manner that the question is deserving of serious thought and attention.

It would be highly desirable that a special article be added to the paper code specifying tolerances for the longitudinal and transverse variations in weight, outside of which the paper could be rejected. An investigation in which all paper converters would doubtless be only too pleased to co-operate would determine what variations are permissible in each of the converting processes, and the establishment of the corresponding tolerances would then be a simple matter. Such a clause would be in the interest of all concerned, both manufacturers and users of paper.

Box Board Production for July

WASHINGTON, D. C., September 14, 1925.—The Department of Commerce announces July figures on the operations of boxboard manufacturers, based on reports of 89 firms operating 111 plants. The capacity data in the following table vary according to the normal number of working days in each month, Sundays and holidays being excluded until the end of May, 1924, and Saturdays also being excluded since June 1, 1924, when the five-day week was adopted by about 80 per cent of the mills.

Year and Month	Operation			Production			Unfilled orders (end of month)
	Inch hours		Per cent of capacity	Tons		Per cent of capacity	Orders received
1924	Capacity	Operated		Capacity	Output		Tons
January	9,855,612	8,542,957	86.7	229,814	181,953	79.2	198,156	111,825
February	9,476,550	8,290,289	87.5	220,975	179,854	81.4	167,855	103,643
March	9,855,612	9,194,400	93.3	229,814	200,411	87.2	195,635	97,181
April	9,855,612	8,574,444	87.0	229,814	182,817	79.5	158,980	73,629
May	9,855,612	8,253,431	83.7	229,814	173,483	75.5	165,868	68,676
June	7,960,302	6,693,458	84.1	185,619	151,414	81.6	167,658	85,414
July	8,360,484	7,174,718	85.8	197,186	164,762	83.6	186,259	105,009
Total (7 mos.)	65,219,784	56,723,697	87.0	1,523,036	1,234,694	81.1	1,241,411	———
1925								
January	7,960,302	8,388,897	105.4	185,619	199,633	107.5	199,649	112,914
February	7,600,440	7,550,968	99.3	177,320	177,292	100.5	*162,724	*100,403
March	8,360,484	7,569,995	90.5	197,186	179,067	91.0	*169,924	*90,062
April	8,360,484	*7,654,378	91.6	197,186	*185,866	94.3	*169,914	*79,127
May	7,980,462	7,111,776	89.1	188,223	163,956	87.1	*175,246	*83,415
June	8,360,484	7,983,150	95.5	197,186	190,310	96.5	*193,564	*92,022
July	8,740,506	8,272,036	94.6	206,149	196,522	95.3	*218,040	111,919
Total (7 mos.)	57,363,162	54,531,200	95.1	1,348,869	1,292,646	95.8	1,289,061	———

Year and month	Shipments of boxboard	Stocks of boxboard end of month	Consumption of waste paper			Stocks of Waste Paper (end of month)		
	Tons		Tons		Per cent of capacity	Tons		
1924			Capacity	Consumed		On hand	In transit	Unshipped purchases
January	179,947	46,696	217,828	170,291	78.2	132,010	14,324	40,891
February	176,037	50,513	209,450	169,644	81.0	127,259	14,353	27,100
March	202,097	48,827	217,828	186,463	85.6	144,118	15,417	24,480
April	182,532	49,112	217,828	169,573	77.8	143,601	11,918	27,631
May	170,821	51,774	217,828	165,479	76.0	142,319	11,632	26,854
June	150,920	52,268	175,938	148,440	84.4	159,767	13,674	34,022
July	166,664	50,366	184,778	158,734	85.9	165,802	16,939	34,870
Total (7 mos.)	1,229,018	———	1,441,478	1,168,624	81.1	———	———	———
1925								
January	195,501	52,466	175,938	193,285	109.9	172,382	18,846	34,974
February	*176,101	*53,960	167,910	170,023	101.3	172,456	16,635	27,110
March	*180,418	51,835	184,778	170,363	92.2	176,035	13,199	22,948
April	*179,772	57,212	184,778	170,487	92.3	172,223	14,307	32,590
May	*168,353	*53,327	176,379	159,095	90.2	174,726	12,686	26,129
June	*184,928	*59,452	184,778	*179,953	97.0	166,467	13,872	25,266
July	190,667	64,600	193,177	184,295	95.4	160,099	11,953	34,358
Total (7 mos.)	1,285,740	———	1,267,738	1,227,501	96.8	———	———	———

*Revised.

F. M. Call Returns From Cruising Trip

OLD TOWN, Me., September 16, 1925.—Mr. Frank M. Call of the James W. Sewall office has returned from an eight months' cruising trip on the Northern Peninsula of Newfoundland. Mr. Call's work has been in the vicinity of Hare Bay, where Dr. Grenfell has his hospital at St. Anthony.

Mr. Call says that the salmon fishing is unrivalled and that the country is well worth going into from a sportsman's viewpoint alone.

Esparto as a Paper Making Material*

By Merle B. Shaw,[1] George W. Bicking,[2] and Raymond R. Rumsey[3]

Introduction

Esparto is extensively employed in the manufacture of paper in European countries deficient in pulp wood. In general, it is used for book and other print papers and is therefore comparable to the soda pulp commonly employed in the United States. Statements have been made that large quantities of esparto pulp could be supplied to the paper mills of this country at no higher cost than wood pulp and that the paper produced from esparto has strength and printing qualities superior to those obtained with soda wood pulp. A partially pulped stock made from esparto is now being offered for export to this country. In view of its paper-making value, the tests herein described have been made.

Occurrence and Characteristics of Esparto

1. General

Esparto is a perennial rush-like grass indigenous to southern Spain and the northern coast of Africa, from which regions large crops are obtained without cultivation. The lands most favorable to the growth of esparto are sandy and at moderate altitudes.

The grass attains a height of 3 or 4 feet and consists of two distinct parts, that near the root, which is hard and highly lignified and the upper portion, which is much softer and less lignified. Only the upper portions yield fiber suitable for use. The stems are cylindrical, without knots, but coated with short, stout hairs, and grow in clusters of from 2 to 10 feet in circumference. When young and tender the grass sometimes serves as food for cattle, but after a few years the cellulose formations render it more solid and tough. The blades vary from 6 inches to 3 feet in length and, because of the tenacity and flexibility of the fiber, are well suited for production of cordage, baskets, and similar articles.

Esparto is not harvested by mowing, but the blades, the source of fiber, are pulled from the stems by hand. When so harvested during the dry season, the roots and stems are left intact, thereby permitting ready growth of a new crop and preventing the introduction of roots and undesirable materials into the product intended for market. If grown from seed, the stems require 12 to 15 years' growth before they produce annual crops. The plants sometimes live for sixty years.

2. Sample Used in Tests

Six bales of partially pulped esparto, designated as "semi-pulp," was supplied for the paper-making tests. No information as to the preliminary treatment given the material before baling or the losses resulting therefrom, could be obtained.

Paper-Making Equipment

The pulping and paper-making tests were made on both laboratory and semicommercial scale.

The apparatus employed in the laboratory experiments consisted of a small rotary boiler, a ½-pound beater, and a fiber sheet mold. Inasmuch as this equipment has previously been fully described and illustrated, the reader is referred to the earlier papers for details of construction and manipulation.[4]

The semicommercial tests were conducted under practical mill conditions. The usual type of rotary boiler was employed in the preparation of the stock and the following equipment was used in the subsequent paper-making processes: A 50-pound wood tub beater with manganese-bronze bars and plate; a small Jordan with iron bars; a 4-place screen; and a 29-inch Fourdrinier machine with wire 33 feet long and having two presses; nine 15-inch dryers; a small machine stack of seven rolls and a reel.[5]

Paper-Making Tests

1. Laboratory

The esparto semi-pulp was separated by hand and samples were taken for determination of moisture content. The material was then cooked with caustic soda in the small experimenal rotary boiler. A number of cooks were made, keeping all conditions constant except the percentage of caustic soda. The percentages of caustic, based on weight of semi-pulp, were 3, 4, 5, and 6, respectively. The resultant pulp was washed, bleached, beaten, and made into sheets (on the sheet mold) in the usual way. The cooking constants were:

Weight of bone-dry semi-pulp	1.5 pounds
Caustic soda (expressed as Na_2CO_3)	3-6 per cent
Causticity of cooking liquor	99 per cent
Cooking temperature	255-260 degrees F.
Cooking pressure	30-35 pounds
Time for raising temperature	½ hour
Time for cooking at temperature	5½ hours
Time for cooling	½ hour

The yield of pulp was from 73 to 78 per cent and the bleach required, expressed in terms of 35 per cent bleaching powder, was from 11 to 14 per cent. The results of the tests on the papers produced are given in Table 1. The measurements have been converted to a 70-pound weight basis for direct comparison, actual weight differing little from the converted weight. Tests on soda and sulphite pulps are included for comparison. It will be noted that the esparto fiber of greatest strength was from the cook using 5 per cent of caustic; also, that esparto is appreciably stronger than soda pulp and aproaches sulphite in strength.

TABLE 1

Results of Laboratory Paper-making Tests

Pulp	Caustic soda added*	Weight 25 by 40 500	Bursting strength	Bursting strength ratio 500 to weight, 25 by 40	Breaking strength (1 inch width) Long direction	Breaking strength (1 inch width) Short direction	Tearing strength Long direction	Tearing strength Short direction
	%	Lbs.	Pts.	%	Lbs.	Lbs.	g.	g.
Esparto	3	70.0	14.9	20.8	7.9	8.2	57.0	50.3
Esparto	4	70.0	16.9	24.4	9.1	9.8	61.5	61.2
Esparto	5	70.0	18.8	25.8	10.0	9.8	64.0	64.5
Esparto	6	70.0	12.5	17.1	5.9	7.8	52.3	53.4
Soda	—	70.0	14.4	20.5	6.2	6.6	42.8	44.9
Sulphite	—	70.0	27.0	45.2	11.6	11.6	76.7	78.4

* In terms of Na_2CO_3, based on weight of bone-dry fiber.
† Sample taken from sheet (as formed on the sheet mold) in direction indicate

2. Semicommercial

The pulp for the paper machine runs was cooked with caustic soda liquor in the semicommercial rotary boiler. In general practice abroad, however, a stationary vertical type of boiler, known as a "vomiting" boiler, is employed. Steam admitted at the bottom of the vomiting boiler causes the caustic soda liquor to be continuously circulated upward through "vomit" pipes and ejected upon the material with which the boiler is filled. The percentage of caustic soda employed in the following tests, based on weight of bone-dry semi-pulp, was 5 and 6, respectively. The cooking constants were:

Causticity of cooking liquor	90-95 per cent
Cooking temperature	255-260 degrees F.
Cooking pressure	35-43 pounds
Time for raising temperature	30-45 minutes
Time of cooking at temperature	6½ hours

The baled semi-pulp contained sand, stones, particles of coal, and fibrous impurities such as root ends, weeds, etc. These extraneous fibrous materials, because of their lignified nature, are difficult to cook or bleach, and if not removed show in the finished paper as specks and shives. The laboratory tests had indicated the necessity of dusting and cleaning the material before cooking, but a cook was made, nevertheless, on the pulp as received, the material being merely loosened before being furnished to the boiler. Six per cent of caustic was used and the pulp, after being washed and bleached, was run over the paper machine. The finished paper was very dirty and was considered unsatisfactory for use. The material for the remainder of the cooks was therefore dusted before being sub-

* Published by Permission of the Director of the National Bureau of Standards of the U. S. Department of Commerce.

TABLE 2

RESULTS OF SEMI-COMMERCIAL PAPER-MAKING TESTS

Cook No.	Fibrous material	Caustic soda added*	Yield of bone-dry pulp: Loss in cleaning	Yield of bone-dry pulp: On dusted material	Yield of bone-dry pulp: On material as received	Weight 25 by 40—500	Bursting strength	Thickness	Ratio bursting strength to weight, 25 by 40—500	Gloss, average of felt and wire sides	Breaking strength (1 inch width): Machine direction	Breaking strength (1 inch width): Cross direction	Tearing strength: Machine direction	Tearing strength: Cross direction
		%	%	%	%	Lbs.	pts.	in.	%	%	lbs.	lbs.	g.	g.
1	Esparto	6	10	70	63	55.0	19.1	0.0045	34.8	——	13.4	8.5	72.0	59.6
	Esparto-sulphite†	—	—	—	—	55.0	25.2	0.0036	45.8	24.3	19.3	10.2	63.3	60.5
2	Esparto	5	10	70	63	55.0	20.4	0.0044	37.2	——	14.6	10.4	81.2	75.0
	Esparto-sulphite	—	—	—	—	55.0	26.0	0.0040	47.2	22.9	21.5	10.4	85.0	78.0
3	Esparto	5	19	71	57.5	55.0	22.6	0.0048	41.1	——	15.9	9.8	73.5	76.2
	Esparto-sulphite	—	—	—	—	55.0	29.0	0.0037	52.6	23.5	21.8	12.6	70.8	65.5
	Soda-sulphite	—	—	—	—	55.0	24.0	0.0037	43.7	28.0	22.6	11.6	49.4	47.5

* In terms of Na_2CO_3, based on weight of bone-dry fiber.
† Esparto to pulp for the esparto-sulphite runs taken from same cook as pulp for esparto runs.

jected to the digestion process. The resulting losses in weight are given in Table 2. The greater loss for the third cook was due to an additional dusting having been given the semi-pulp for that run. A considerable amount of paper-making material was lost thereby but the extra dusting was necessary to obtain a clean sheet. The pulp for all the runs was cleaned further by the picking out of

ESPARTO FIBRES MAGNIFIED

foreign matter exposed during the washing and bleaching operations.

The bleached esparto pulp was in each case divided into two parts. One part was beaten and subsequently made into paper, without the addition of size. The other portion was added to an equal amount of sulphite pulp and the resultant mixture was beaten, sized, and made into paper. measurements on the finished papers are given in Table 2. A test on soda-sulphite pulp is included for comparison. The measurements have been converted to a 55-pound weight basis for direct comparison, actual weight differing little from the converted weight. The data of Table 2, as well as of Table 1, show esparto to be stronger than soda pulp.

Fiber Characteristics

The accompanying photomicrograph is of the esparto fiber from the cooked pulp. It will be noted that the fiber is smooth and of small diameter. Miscroscopic examination shows it to be tubular in form.

Table 3 gives comparative dimensions of various paper-making fibers. The relative small diameter-length ratio of esparto indicates that the fibers should felt well in paper.

Summary and Conclusions

On the basis of quality of paper produced, the results reported herein indicate that the esparto semi-pulp of this investigation compares favorably with soda wood pulp as paper-making material. Cooks were made with varying amounts of caustic soda and the best results were obtained when 5 per cent was employed. The esparto fiber of these cooks was appreciably stronger than the fiber of soda pulp and approached sulphite in strength.

In order to obtain a clean sheet, free from specks and shives, it was necessary to clean the pulp mechanically before cooking. The yield of paper-making fiber, based on weight of material as received, was 57 to 63 per cent.

TABLE 3

FIBER MEASUREMENTS

Fiber	Average length mm	Average diameter mm
Cotton	30	0.025
Linen	25	.020
Manila	7	.020
Jute	2.5	.022
Straw	1.5	.015
Esparto	1.5	.012
Esparto†	1.7	.009
Wood, coniferous	3	.030
Wood, deciduous	1	.020

Before purchasing a supply of esparto, or any new paper-making material, for use on commercial scale, it is advisable to make a practical test to determine whether the percentage yield of fiber warrants paying the quoted price per pound.

Acknowledgment is made to R. E. Lofton for the microscopic work involved in the preparation of this report.

Western Board Superintendents Meet

ELKHART, Ind., September 16, 1925.—The following officers were elected at the meeting of the Western Board Division of the American pulp and Paper Mill Superintendents Association, held on September 4:

Chairman, Henry Bert, Monroe Paper Products Company, Monroe, Mich.; Vice-Chairman, L. T. Murphy, Franklin Board and Paper Company, Franklin, Ohio; Secretary-Treasurer, Wm. H. Sievert, Michigan Carton Company, Battle Creek, Mich.

The opening address was given by Chairman Henry Bert, who asked that heads be bowed for one minute in respect of Harry Eurich, who was accidentally killed on August 23, 1925.

W. W. Hichols gave a very interesting paper on Elimination of Waste and Increase of Production by little Methods of Maintenance of Belting and Transmission Equipment.

This was followed by discussions on various types and kinds of belting. The Jordan Engine coming up for discussion which type of Jordan being the best for use in the manufacture of board, and some very interesting problems coming up also on beaters, in fact the chairman being obliged to call a halt at one o'clock for luncheon. After lunch the mills of the American Coating Mills and the Lincoln Paper Mills were visited by all as guests of these concerns.

The banquet at which sixty-three were present, was sponsored by the American Coating Mills and the Lincoln Paper Company. F. H. Church, of the Elkhart Chamber of Commerce, was the principal speaker of the evening, speaking on Industry and the Development of the Paper Mill. Cyrus E. Frye, president of the Lincoln Paper Mill, was toastmaster of the evening.

Section of the

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THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

Why The Budget?*

By Walter F. Vieh

Most of us think of budgets as having something to do with public finance or with the successful management of a household. We probably got the first impression from the daily press, where we read that this government or that is endeavoring to balance its budget; while the second impression is probably induced by the advertisements of savings banks, which would have us believe that we should spend 25 per cent of our incomes for shelter, 10 per cent for personal advancement, etc., and that we should save 10 per cent. Webster's New International Dictionary still informs us that a budget is "the annual financial statement which the British chancellor of the exchequer submits in behalf of the ministers to the house of commons for approval." . . .

Has Acquired New Significance

But since the first years of the post-war period, when there were so many business calamities, resulting largely from failure to keep houses in order against emergency, the budget has acquired a new significance, and business has learned something about it, about the practice of looking into the future. Let us not suppose, however, that this modern development has been generally acclaimed. The truth is that there is still stubborn opposition to the use of budgets in a good many quarters. This opposition springs mostly from the knowledge that certain establishments have been eminently successful without them in the past, thus seeming to prove them unnecessary to profitable operation. The remarkable thing is that the objectors fail to let their imaginations include what the same establishments could have accomplished if they had done some business forecasting. It is interesting to reflect upon what can be done with the assistance of business budgets and, in passing, to study some of the principles of budget making.

Until a few years ago, business was content with a single annual determination of profits, which was undertaken at the close of the fiscal year and rested upon an inventory taken at that date. All can remember the hustle and bustle of inventory time. More recently, however, aggressive executives have demanded more frequent determinations of profits, and we now find semi-annual, quarterly, and even monthly calculations of operating results and statements of financial position. These more frequent statements have been made possible through the use of perpetual inventories of merchandise or of production in its various stages.

But, because of the very nature of the accounting records, even these monthly reports sometimes reach the executive too late to be of any practical value in correcting a down-hill trend or arrive only after much damage has been done. The executive finds it imperative, therefore, to forecast the condition of his affairs, and for this purpose he adopts the budget. He looks upon his accounting records largely as a means of preparing for the future, rather than as an historical sketch, for he knows, if he lays his plans carefully for the future, and constantly checks them with the actual accomplishments, the records must eventually prove satisfactory. Sufficient testimony of the value of a budget may be found in the fact that it has been adopted by many of the country's largest, most progressive and successful corporations.

Years of Poor Business Inevitable

Until we discover practical means of overcoming the evils of booms and depressions, which are inherent in our present economic structure, years of poor business and even unprofitable years are inevitable. Those concerns are most successful which go into a period either of depression or of boom knowing what to expect and being prepared for the outcome. The budget looks into the future with the hope of averting impending business catastrophe or, at least, of reducing the effects of the storm when it breaks. On the other hand, the budget helps to point out how full advantage can be taken of changing market conditions, which wise plans might turn to profit.

There is perhaps nothing so discouraging as inability to fill orders; and it is disquieting, when business is brisk, to find that if only the market had been anticipated, and purchases made when prices were low, the present profit percentage could have been much improved. On the other hand, it is disastrous to have large stocks which cannot be liquidated and tie up working capital when it is sorely needed. In such circumstances, prices are almost invariably on the decline and the liquidation of stocks, even when accomplished, is attended with serious losses. Means have not yet been devised for controlling the market, but on every hand there are evidences of the trend of important economic influences, and we should make the most of the information.

The adoption and use of a budget means, first, reasonable assurance that a fair gross profit upon sales will be earned and, second, the assurance that every possible dollar of gross will be carried to net profit, by means of adequate control of expenses. If the gross profit has not been sufficient to warrant continuation of the business the budget will soon disclose that fact.

Co-operation Necessary

The accounting department is the source of information concerning past performances, but other departments must be called upon for estimates of future conditions. The success of the budget depends upon the degree of co-operation between the several departments, the spirit in which the task is undertaken, and the

*From *The Journal of Accountancy.*

patience with which the budget is administered. Past experience plays a large part in the preparation of the budget, and it requires time and patience properly to assimulate and interpret the record of the past. Estimates of the future play another large part; the first estimates may be entirely too sanguine, or the contrary. It is only by means of careful comparison of the estimates of the future with the accomplishments, and by the most painstaking analysis of the differences, that the budget can be made successful.

As a result of these comparisons and analyses, it has been demonstrated many times that the tendency of the estimates is to approach ever more closely what will eventually prove to be the accomplishment. Two officers of the Thomas A. Edison Industries, collaborating in an article on business forecasting in their establishment, stated that the forecast of November 30, 1921, which was made thirty days in advance, was so near the actual figures when finally produced that for all practical purposes it would have been unnecessary to substitute the actual final figures for the estimate. Who can fail to appreciate the value of such advance information? It must be admitted, however, that such results cannot be expected immediately. They require development over a considerable period of time.

Must Contemplate Definite Period

In laying the plan for a budget a definite period must be contemplated. Furthermore, it must be a period which is ordinarily made the subject of record in the company's accounts, in order that the experience and the estimates may be comparable. At the outset a relatively short period should be embraced—a month, perhaps, being considered the first unit of time. The plans should contemplate, however, an ultimate forecast that will go much farther ahead. The influence of certain economic factors may not be felt for a period of six or eight months; and since the forecast must take these trends into account, the budget, sooner or later, must be prepared so as to show us our destination six months ahead, or perhaps even a year ahead.

We cannot hope to measure these trends exactly, and the budget will be inaccurate to the extent by which the measurements err. Furthermore, as the predictions of the meteorologist sometimes go astray because of unexpected changes in the wind, so the predictions embodied in the budget may prove to miss the mark as new circumstances exert their influences. To avoid being misled in such an event, the executive must see that his budget is revised at frequent intervals, so as to take changed conditions into account.

There may be considerable divergence of thought regarding the probable effect of current influences, but all men are entitled to their opinions on the subject, and capable executives do have opinions. The least that can be done is to synchronize all the operations of the business and to direct them in accordance with the conclusions reached after weighing all the factors.

Various Kinds of Budgets

Budgets have been prepared for a great many purposes. There are budgets of sales, budgets of expenses, manufacturing or production budgets, treasurers' budgets, etc. Perhaps the manufacturing or production budget is met most frequently. All these serve very important purposes and it is encouraging to find them in use; but such departmental budgets are in reality only a beginning. They are a part, rather than the whole and until the parts are assembled and proper cohesion is established, full benefit can not be obtained from them. The modern development is a co-ordination of all the departmental budgets, which results in a finished picture of the business as a whole on a future date. Such a picture renders the utmost assistance. It keeps the business in balance. Moreover, it either lends encouragement when things are already going well, or it gives the danger signal in sufficient time to correct erroneous tendencies before the damage becomes too serious.

The complete budget comprehends a balance-sheet or financial statement as it is expected to appear upon a future date, together with a profit-and-loss account for the period intervening.

The accounting records of almost any business are from ten days to a month and a half behind the date of closing. This condition is unavoidable; it results from the necessity of waiting for information from vendors of materials purchased or services rendered, and for other information relative to production and sales, prepared at outlying plants or branch offices. The decision required of an executive often depends upon the present position of the company's finances. The complete budget, starting with the last known position and showing the effect of transactions expected to be completed subsequently, bridges the gap and brings the information down to the latest possible date. It follows that the wider the gap, the more urgent is the need for the budget and the longer must be the budget period.

What Well Organized Budget Calls For

A well organized budget calls upon the sales department for its estimates of the total sales, the sales by classes and the probable shipping dates; upon the production department for the labor and materials required and an estimate of the capacity of the plant to meet the shipping schedule; upon the purchasing department for the estimate of purchases required to supply the necessary material to the production department; upon the credit department for the probable collections from customers; and finally, upon the treasurer's department for financial and administrative requirements. All these estimates must be submitted to a central authority, whose duty it is to co-ordinate and balance them. The sales estimate in itself would be futile if the production department had not the capacity for turning out goods to meet the shipping schedule. It would likewise be futile if the purchasing department discovered that materials or supplies required could not be purchased in the present market. The purchasing department must give due consideration to the status of the inventory and the additional requirements of material to meet production. Lastly, the treasurer must be prepared to say that he can or can not finance the estimated schedules. To finance them may require going into the market for money, and the treasurer must know whether his credit has been already strained or whether the company can afford to borrow at prevailing rates of interest.

It is the task of the central or co-ordinating authority to see that all the estimates are sound and that they dovetail. This authority is charged with a very important responsibility. In its consideration of the estimates it must be constantly on its guard against penny-wise-and-pound-foolish principles. On the one hand, it must know not only that it can afford to incur certain expenses, but that such expenses are justifiable. On the other hand, it must know that while certain expenses appear to be out of proportion, yet their curtailment will be at the expense of service or of the creation and maintenance of goodwill, and therefore can not be afforded.

What the Finished Product May Disclose

Having accepted the estimates of the several departments, as revised and co-ordinated, the authority must submit them to the accounting department. Here a balance-sheet and profit-and-loss account are prepared, which begin with the last known figures and set forth the application of the estimated changes, to produce the probable balance-sheet as at the end of the budget period and the resulting profit-and-loss account. The finished product may disclose a condition which requires immediate attention. For example, the ratio of current assets to current liabilities may appear to be entirely unhealthy; the cash balance may be hopelessly inadequate to finance the operations which can be expected in the succeeding period; or, conversely, large sums of cash may be accumulating which may well be applied in reduction of bank indebtedness, with the consequent reduction of interest charges. In any event, the picture is complete, and it may be studied from any desired angle.

The work of the co-ordinating authority is of such importance that it demands the assignment to it of some of the most capable

members of the organization's staff. They must be familiar with the problems of their own company. They must be in touch with what goes on in the world of affairs. They must be imbued with the spirit of co-operation. The work which they undertake may in itself foster co-operation more effectively than any other single undertaking in the entire range of the company's problems.

Co-operation From Department Heads

The spirit of co-operation must also extend to the department heads, who are responsible for most of the preliminary figures. Many of these subordinates may, at first, consider the budget a useless expense or a contrivance designed to impede the progress of department work, but they will not remain obstructionists after the results of the budget begin to be apparent. Not only must department heads have a voice in the preparation of the budget, but they must be furnished with reports of the operating results. The task of analyzing differences between the estimates and the accomplishments will frequently require the assistance of these men, and their participation can not fail to prove interesting and instructive to them.

When all is said and done, the budget rests primarily upon the sales. Consequently, sales must be given careful consideration, not only in the light of present market conditions, but also in the light of outside influences which are known to be exerting pressure upon the market. This calls for a high order of talent, but it presents a splendid opportunity to the executive who is well grounded in economics and manages to stay in touch with reports of major movements. He must know his ground well enough to reach his own conclusions, despite conflicting opinions regarding the probable course of business.

The executive who knows his destination and lays careful plans to reach it, can not fail to inspire confidence, and it is almost a foregone conclusion that he will reach his goal.

Treatise on Mill Type Roll-Winders

There has been so much grief at the winder end of the average paper machine that mill operatives have come to think a certain amount of trouble in the winding of paper into rolls is a necessary evil. The fact is that the whole subject of roll production has not been given the study it deserves. Not only is there a great divergence of ideas as to how a Slitting and Roll-Winding Machine should be built and operated, but there is not even a clearly defined lingo in which to describe the various kinds of machines.

Winders are divided, in a general way, into what are called "Shaft Winders" and "Drum Winders." In some cases there are combinations of both; that is, a machine where the paper is wound on a driven shaft, and the outside surface of the roll is in contact with the drum. This would be a "Shaft-Drum Winder." Then there are "Two-Drum Winders" and "Four-Drum Winders"; and some Two-Drum Winders have a third drum which rests on the top of the roll of paper as it builds up, called a Riding Roll. This is a "Two-Drum Riding-Roller" type.

In the matter of slitting, there is the "Top Slicter," the "Rotary Shears," and the "Score-Cutter."

All of these classes of machines and methods have been scrambled together and unscrambled and rescrambled again, with the sole exception of the Two-Drum Riding-Roller method of winding, combined with the Score-Cut method of slitting, which together constitute what is known as the Camachine principle.

The Cameron Machine Company has just received from the press an illustrated treatise compiled by them on the subject of Mill Type Winders. This thirty-six page booklet will be mailed to any one interested in the production of rolls of paper or paperboard, either in mills manufacturing the paper or in plants utilizing it.

In dealing with this subject of roll-winding methods and Roll-Winding Machines, it has been necessary to go into detail; and in outlining the basic principles on which their machines are built, Cameron Machine Company has pointed out the difference between these principles and those used in other types of Winders.

Camachine high speed Winders for modern mills are dealt with —Type 20, Type 18, Type 14 and Type 12, for service depending upon the width of the web handled and the speed of operation required to meet the mill's conditions. Not only are the machines illustrated and described, but an interesting treatise on the subject of slitting and winding accompanies the descriptions.

In this connection it might be well for those dealing with the practical side of paper manufacture to be familiar with certain other treatises issued by Cameron Machine Company, which will also be sent if desired—"A Study and Comparison of Methods of Slitting and Winding Rolls of Paper and Board," "Slitting Methods Compared," and "The Cause and Cure for Welts and Wrinkles in the Surface of Rolls of Paper."

The subject of slitting and roll-winding has been very meagerly dealt with in the average technical journal, or, for that matter, in printed books on paper production. The contributions of Cameron Machine Company constitute practically all of the literature on this subject, and the company invites the careful scrutiny and criticism of practical men, in its effort to avail itself of all technical and practical experience in this field. They devote themselves solely to the designing and building of machines for producing rolls of paper and other materials, in mills where paper is made and in factories where it is utilized, as well as in miscellaneous industries requiring rolls.

Paper Industry Depressed in Great Britain

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 16, 1925.—The general trade depression in Great Britain is reflected in the state of the paper industry, according to a review of the market published in the *London Times Trade and Engineering Supplement.* The renewed demand from Australia has stimulated production in the news print mills, but many wrapping paper mills are closed down or are on the point of closing owing to lack of orders. This section of the industry has suffered most keenly from foreign competition during the past two years, a question in the House of Commons having brought out the fact that the bulk of the 22 mills which closed down during the year 1924-25 belonged to this group. Outside of wrapping papers, foreign competition has been most keenly felt by the mills making wood-free papers, and a few mills in this group have also been forced out of business. Business is especially poor in the fine paper section, and makers of tubsized papers are finding it difficult to keep their staffs fully employed. Some of the larger houses are sustained by export orders, but the mills depending on domestic orders are experiencing difficulty in keeping their machines reasonably busy. A distinct tendency on the part of purchasers to favor lower quality papers is reported.

Big Demand for News Print in Finland

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 16, 1925.—The demand for news print paper has been unusually large for this season, and as the mills in Finland have important orders on hand for some time to come there is little likelihood of a reduction in prices at present, says a report to the Paper Section of the Department of Commerce from American Consul McGurk, at Helsingfors. He continues discussing the Finnish paper market.

"Conditions in the wrapping paper market, however, have not improved. Unimportant orders are being received from Denmark and Germany, but no inquiries are reported from France, Belgium, and the Netherlands, and the British market remains greatly depressed. The unsettled conditions in China have further reduced exports to the Far East. No important changes are reported by the chemical pulp mills. Some interest is shown in next year's sales and negotiations are in progress. The market for wood pulp is still dull, but an improvement is expected."

The Need for Scientific Costing in Modern Business*

By Prof. A. W. Kirkaldy, M. A., B. Litt., M. Com., Prof. of Economics and Commerce, Univ. of Nottingham.

In opening his lecture, Prof. Kirkaldy explained that he was not an accountant but as an economist and student in industrial history he occupied an outside position which enabled him to look at questions of industrial policy from an angle which might have something of interest and perhaps of value to those who were more intimately connected with industrial life.

What Is Costing?

What is costing? To answer this question adequately would require not only technical knowledge, but a knowledge of manufacturing developments over a fairly long period. For at one time costing was a fairly simple matter. The population was scattered all over the country, many of our industries were carried on in cottages or in manufactories of the simplest description and all that was required was to cost up the labor and material, plus small working expenses for tools and premises. But the Industrial Revolution with the introduction of steam power for driving machinery brought modifications in production and its processes which necessitated something more than the costing of mere labor and material. With each improvement in process and each advance made by invention, there is a greater distance between the simple costing of more primitive times and the increasingly complicated requirements of today. Many new elements have entered into cost, and overhead charges have became a very complicated and difficult subject. In a word, modern production entails a very highly developed system of team work wherein there are very dissimilar members of the community working towards the final result. There is not only the work done in the factory, or in the mine, or on the farm, but there is the investigation by the scientist and the inventor in the laboratory and a chain of individuals between the two. More recently another great change has been in process. Great Britain had for a long time the advantage of obtaining cheap power from cheap coal. This has now practically come to an end. During the time that advantage was enjoyed there was gross extravagance. A very large proportion of the nation's coal was wasted in the process of merely obtaining heat. If cheap power is now to be obtained, power at a price which will enable us to compete with rivals who are getting cheap power from water, or oil, or gas, our methods must be radically modified and the coal resources of the country must be used with greater economy. Very little coal ought to be seen away from the colliery, where it should be reduced to its constituents, and the gases and the oils distributed through pipes. To carry coal about in ten-ton trucks was probably the method employed by Noah when he bunkered the Ark. At any rate, today this method is out of date.

Days That Are Gone

For a long time our insular position, coupled with events in Europe and in other parts of the world, gave us a practical monopoly in manufacturing. Hence we became the workshop of the world. During that period Great Britain perfected methods of manufacture, but the commercial side of business proved less interesting. There was no apparent need to bother about scientific costing or scientific business methods. Almost any goods we could make would sell. Those days are gone. A quarter of a century ago Mr. Chamberlain, in pondering over the position, saw that some of our rivals benefited by applying science to manufacture, and others by studying the science of commerce. Thus in the university which he established at Birmingham, he saw that not only were science departments organized to help our manufacturers, but he establishes also a faculty of Commerce. Our rivals watched this development and copied it. At the present moment both in America and in Germany higher commercial teaching receives very much greater attention and attracts a very much larger number of students than is the case in this conutry. The foreigner realizes the value of this. We still hang back.

Suffering From Competition

This country is suffering severely from competition. The whole world has been startled by the order for motorships which has gone to Hamburg. It is a matter for satisfaction that all interested parties are to meet and discuss shipbuilding costs. It is hoped they may fearlessly face the facts and not tamper with them.

It has been suggested that to meet our present difficulties in foreign markets we should work longer hours and reduce wages and salaries. Is this the best and only remedy? In some industries or employments it may be found that it is so, but it should be remembered that it is necessary to have the consent of all those affected, and they are entitled to know the facts. As a rule, low paid labor is dear labor.

Different View Points

It should always be remembered that the employer's point of view is the cost of labor, while naturally the worker looks at the wage he is able to earn. It may be that some employers have given more attention to the wages book than the organization of an efficient costing system. In America, for instance, where this subject has been developed to a very high point, labor cost is comparatively low and yet, high wages are paid. Indeed, in the best works, if a man cannot earn a high maximum wage he cannot get employment. The old-fashioned method of studying the wages book has a great deal to do with calcanny; restriction is almost universally the result of attempts to speed up. In many of our industries in remedy required at the present time would appear to be efficient costing. At any rate, a really good system would be bound to throw a flood of light over many sections, where at present all is uncertain.

We are at the parting of the ways, at a great and vital crisis in our history, and it behooves us to explore every avenue to find a means of maintaining our position in world trade and commerce. It may be suggested that one of the surest avenues along which we can travel will be that leading to the universal use and application of scientific costing.

*From *The Cost Accountant.*

Cost Section

Another Big Power Development

[FROM OUR REGULAR CORRESPONDENT]

Montreal, Que., September 14, 1925.—The Ottawa River apparently is to be the scene of the next hydraulic development in the province of Quebec, for permission has been granted by the provincial Government to Adhemar Gaston Munich, of Montreal, to develop a section of the Chat Falls, located on the Ottawa river in the township of Pontiac. This development is regarded here as being preliminary to the development of 150,000 h.p. from the Chat Falls. At the present time, it is figured that in the neighborhood of 5,000 h.p. can be developed at Chat Falls, but, of course, with intensive development and the grouping together of all the falls which form the group, the figure of 150,000 h.p. may be attained.

The provincial Government granted rights to operate the falls in 1900, when a sum of $14,000 was paid for the privilege, but certain obligations which went with the privilege were not developed although an additional delay of five years was granted in 1907. Two big companies are reported to be indirectly interested in the power project, they being the Ottawa Electric and the International Paper companies.

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NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING SEPTEMBER 12, 1925

SUMMARY

News print.....173 rolls
Wrapping paper.....300 bls., 8 cs.
Printing paper.....40 bls., 190 cs., 347 rolls
Wall paper.....2 bls.
Cigarette paper.....2102 cs.
Surface coated paper.....273 cs.
Writing paper.....21 cs.
Tracing paper.....14 cs.
Drawing paper.....18 cs.
Parchment paper.....12 bls., 2 cs.
Filter paper.....13 cs.
Gold-coated paper.....2 cs.
Colored paper.....4 cs.
Glazed paper.....3 cs.
Photo paper.....2 cs.
Tissue paper.....39 cs.
Decalcomania paper.....5 cs.
Transfer paper.....1 cs.
Silk paper.....9 cs., 17 pgs.
Fancy paper.....9 cs.
Paper hangings.....7 bls., 4 cs.
Hanging stock.....611 bls.
Packing paper.....2 cs., 6 bdls.
Miscellaneous.....757 rols, 266 bls., 88 cs.

CIGARETTE PAPER

American Tobacco Co., Collamer, Bordeaux, 1100 cs.

R. J. Reynolds Tobacco Co., Collamer, St. Nazaire, 640 cs.

De Manduit Paper Corp., Collamer, St. Nazaire, 342 cs.

British American Tobacco Co., Adriatic, Liverpool, 5 cs.

Liggett & Myers Tobacco Co., Pipestone County, Havre, 15 cs.

WALL PAPER

R. F. Downing & Co., Minnewaska, London, 2 bls.

Happel & McAvoy, Minnewaska, London, 6 bls.

PAPER HANGINGS

W. H. S. Lloyd & Co., Minnewaska, London, 7 bls.

W. H. S. Lloyd & Co., Minnewaska, London, 4 cs.

HANGING STOCK

F. & R. Trading Corp., Pittsburgh, Antwerp, 611 bls.

NEWS PRINT

M. Gottesman & Co., Inc., Stockholm, Gothenburg, 173 rolls.

PRINTING PAPER

J. P. Hefernan Paper Co., Ida, Trieste, 34 bls.

B. F. Drakenfeld & Co., Laconia, Liverpool, 17 cs.

Perry, Ryer & Co., Cameronia, Glasgow, 58 cs.

Keuffel & Esser, Deutschland, Hamburg, 71 rolls.

Norwegian Paper Mills, Fred. VIII, Oslo, 261 rolls.

Guaranty Trust Co., Frederick VIII, Oslo, 15 rolls.

Maurice O'Meara Co., Muenchen, Bremen, 38 cs.

Anglo-South American Trust Co., Bergensfjord, Drammen, 77 cs.

J. P. Hefernan Paper Co., Rotterdam, Rotterdam, 6 bls.

WRAPPING PAPER

Coy, Disbrow Co., Inc., Stockholm, Gothenburg, 16 bls.

T. Barrett & Son, Stockholm, Gothenburg, 27 bls.

Maurice O'Meara Co., Topdalsfjord, Sundsvall, 257 bls.

F. L. Kraemer & Co., Deutschland, Hamburg, 8 cs.

PACKING PAPER

Burroughs, Wellcome & Co., Minnewaska, London, 2 cs.

Van Oppen & Co., Minnewaska, London, 6 bdls.

TRACING PAPER

Keuffel & Esser, Deutschland, Hamburg, 14 cs.

DRAWING PAPER

Keuffel & Esser, Deutschland, Hamburg, 12 cs.

Devoe & Reynolds Co., American Banker, London, 4 cs.

H. Reeve Angel & Co., Inc., American Banker, London, 2 cs.

PARCHMENT PAPER

F. L. Kraemer & Co., Deutschland, Hamburg, 12 bls.

E. Dietzgen & Co., Eastern Dawn, Antwerp, 2 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., American Banker, London, 13 cs.

SURFACE COATED PAPER

P. C. Zuhlke, Pittsburgh, Antwerp, 156 cs.

P. Puttman, Pittsburgh, Antwerp, 117 cs.

GOLD COATED PAPER

C. B. Richard & Co., Muenchen, Bremen, 2 cs.

COLORED PAPER

Phoenix Shipping Co., Muenchen, Bremen, 4 cs.

GLAZED PAPER

Richardson Bros., Adriatic, Liverpool, 3 cs.

PHOTO PAPER

J. J. Gavin, Adriatic, Liverpool, 2 cs.

WRITING PAPER

Coenca Morrison & Co., Ida, Trieste, 4 cs.

Guibout Freres, France, Havre, 17 cs.

TISSUE PAPER

F. C. Strype, Laconia Liverpool, 19 cs.

Meadows, Wye & Co., Laconia, Liverpool, 10 cs.

Iwai & Co., Tatsuno Maru, Kobe, 10 cs.

DECALCOMANIA PAPER

Phoenix Shipping Co., Republic, Bremen, 5 cs.

TRANSFER PAPER

Atlantic Forwarding Co., Republic, Bremen, 1 cs.

SILK PAPER

London Feather Co., Muenchen, Bremen, 17 pgs.

S. Gilbert, Rotterdam, Rotterdam, 9 cs.

FANCY PAPER

Whiting & Patterson Co., Majestic, London, 9 cs.

SPOOLS OF PAPER

J. I. Bernitz, Ryndam, Rotterdam, 5 cs.

STRAW BOARD

A. Vuyck, Rotterdam, Rotterdam, 142 rolls.

A. Vuyck, Ryndam, Rotterdam, 142 rolls.

PAPER

Crepe Kraft Paper Co., Inc., Stockholm, Gothenburg, 45 rolls.

Wilkinson Bros. & Co., Inc., Stockholm, Gothenburg, 81 bls.

Wilkinson Bros. & Co., Inc., Stockholm, Gothenburg, 197 rolls.

T. Barrett & Son, Stockholm, Gothenburg, 36 bls.

T. Barrett & Son, Stockholm, Gothenburg, 10 rolls.

C. K. MacAlpine Co., Stockholm, Gothenburg, 20 bls.

C. K. MacAlpine Co., Stockholm, Gothenburg, 118 rolls.

M. M. Cohen, Stockholm, Gothenburg, 129 bls.

M. M. Cohen, Stockholm, Gothenburg, 103 rolls.

E. H. Sergeant Co., Stockholm, Gothenburg, 7 cs.

F. C. Strype, Ala, Rotterdam, 1 cs.

Whitefield Paper Works, Tatsuno Maru, Kobe, 10 cs.

G. H. Sweetman, Majestic, Paris, 3 cs.

Hensel, Bruckman & Lorbacher, Ryndam, Rotterdam, 5 cs.

Japan Paper Co., Colombo, Genoa, 13 cs.

Judson Freight Forwarding Co., France, Havre, 25 cs.

P. H. Petry & Co., France, Havre, 17 cs.

Hensel, Bruckman & Lorbacher, France, Havre, 2 cs.

RAGS, BAGGINGS, ETC

Castle & Overton, Inc., Adriatic, Liverpool, 40 bls. bagging.

Brown Bros. & Co., Adriatic, Liverpool, 110 bls. rags.

Amsinck, Sonne & Co., Inc., Adriatic, Liverpool, 5 bls. rags.

C. R. Spence & Co., Stockholm, Gothenburg, 33 bls. newcuttings.

Darmstadt, Scott & Courtney, Stockholm, Gothenburg, 133 bls. rags.

E. J. Keller Co., Inc., Ala, Rotterdam, 119 bls. rags.

E. J. Keller Co., Inc., Ala, Rotterdam, 53 bls. bagging.

L. H. Abenheimer, Ida, Naples, 61 bls. rags.

Brown Bros. & Co., Ida, Naples, 301 bls. rags.

I. Abela & Co., Ida, Malta, 99 bls. rags.

National City Bank, Ida, Trieste, 243 bls. rags.

Schall & Co., Pittsburgh, Antwerp, 242 bls. flaxwaste.

Amsinck, Sonne & Co., Inc., Minnewaska, London, 69 bls. rags.

G. W. Naylor, Laconia, Liverpool, 356 bags gluestock.

American Woolstock Corp., Laconia, Liverpool, 99 bls. paperstock.

E. J. Keller Co., Inc., Republic, Bremen, 235 bls. rags.

Brown Bros. & Co., Marengo, Hull, 217 bls. paperstock.

Anglo-South American Trust Co., Cameronia, Glasgow, 24 bls. paperstock.

Amsinck, Sonne & Co., Inc., Cameronia, Glasgow, 13 bls. rags.

Mechanics & Metals National Bank, Cameronia, Glasgow, 63 bls. rags.

Baring Bros. & Co., Ltd., Cameronia, Glasgow, 204 bls. rags.

C. R. Spence & Co., Wells City, Bristol, 368 bls. rags.

Philadelphia National Bank, Deutschland, Hamburg, 46 bls. rags.

E. J. Keller Co., Inc., Deutschland, Hamburg, 91 bls. rags.

E. J. Keller Co., Inc, Deutschland, Hamburg, 112 bls. bagging.

E. J. Keller Co., Inc, Deutschland, Hamburg, 83 bls. newcuttings.

National City Bank, Deutschland, Hamburg, 286 bls. rags.

Castle & Overton, Inc., Deutschland, Hamburg, 15 bls. rags.

Union National Bank, Deutschland, Hamburg, 96 bls. rags.

Irving Bank Columbia Trust Co., Deutschland, Hamburg, 322 bls. rags.

Chase National Bank, Frederick VIII, Copenhagen, 637 bls. rags.

E. J. Keller Co., Inc., Frederick VIII, Copenhagen, 131 bls. rags.

Amsinck, Sonne & Co., Inc., American Banker, London, 16 bls. rags.

Brown Bros. & Co., American Banker, London, 361 bls. rags.

Maurice O'Meara Co., Ryndam, Rotterdam, 33 bls. canvas.

Chemical National Bank, Ryndam, Rotterdam, 110 bls. rags.

Chemical National Bank, Ryndam, Rotterdam, 94 bls. bagging.

Mechanics & Metals National Bank, Ryndam, Rotterdam, 142 bls. rags.

Atlas Waste Mfg. Co., Ryndam, Rotterdam, 95 bls. rags.

E. J. Keller Co., Inc., Ryndam, Rotterdam, 89 bls. bagging.

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Imports of Paper and Paper Stock

(*Continued from page 62*)

P. Berlowitz, Ryndam, Rotterdam, 51 bls. bagging.
C. B. Richard & Co., Ryndam, Rotterdam, 52 bls. cottonwaste.
A. W. Fenton, Inc., Muenchen, Bremen, 77 bls. cottonwaste.
Chemical National Bank, Eastern Victor, Antwerp, 201 bls. rags.
S. Silberman, Eastern Victor, Antwerp, 148 bls. rags.
Brown Bros. & Co., Eastern Victor, Antwerp, 58 bls. bagging.
E. J. Keller Co., Inc., Pipestone County, Havre, 57 bls. rags.
Atterbury & McKelvey, Pipestone County, Havre, 682 bls. rags.
Darmstadt, Scott & Courtney, Pipestone County, Havre, 45 bls. rags.
V. Galaup, Pipestone County, Havre, 70 bls. rags.
Salomon Bros. & Co., Pipestone County, Havre, 50 bls. bagging.
A. W. Fenton, Inc., Pipestone County, Havre, 39 bls. rags.
The Barret Co., Pipestone County, Havre, 72 bls. rags.
The Stone Bros. Co., Inc., Pipestone County, Havre, 148 bls. bagging.
Castle & Overton, Inc., Pipestone County, Dunkirk, 147 bls. bagging.
The Stone Bros. Co., Inc., Albania, London, 67 bls. bagging.
Brown Bros. & Co., Albania, London, 57 bls. rags.
M. Snedeker Corp., Jessmore, Belfast, 87 bls. rags.
W. Schall & Co., Jessmore, Belfast, 63 bls. rags.
New York Trust Co., Jessmore, Leith, 103 bls. bagging.
Katzenstein & Keene, Inc., Collamer, Bordeaux, 101 bls. rags.
Katzenstein & Keene, Inc., Collamer, St. Nazaire, 67 bls. bagging.
E. J. Keller Co., Inc., Collamer, St. Nazaire, 45 bls. rags.
Brown Bros. & Co., Mercier, Antwerp, 112 bls. rags.
Amsinck, Sonne & Co., Inc., Mercier, Antwerp, 30 bls. rags.
E. J. Keller Co., Inc., Mercier, Antwerp, 78 bls. bagging.
E. J. Keller Co., Inc., G. Washington, Bremen, 59 bls. rags.
Castle & Overton, Inc., G. Washington, Bremen, 57 bls. rags.
L. H. Abenheimer, Eastern Dawn Antwerp, 136 bls. rags.
E. J. Keller Co., Inc., Eastern Dawn, Antwerp, 57 bls. bagging.
Darmstadt, Scott & Courtney, Eastern Dawn, Antwerp, 114 bls. rags.
A. W. Fenton, Inc., Eastern Dawn, Antwerp, 250 bls. rags.
Brown Bros. & Co., Eastern Dawn, Antwerp, 50 bls. rags.
A. W. Fenton, Inc., America, Bremen, 15 bls. rags.
L. H. Abenheimer, Plutarch, Manchester, 140 bls. bagging.
Castle & Overton, Inc., Oscar II, Copenhagen, 450 bls. rags.
Castle & Overton, Inc., Celtic, Liverpool, 41 bls. rags.
Castle & Overton, Inc., Hektor, Barcelona, 48 bls. newcuttings.
E. J. Keller Co., Inc., Lapland, Antwerp, 246 bls. flaxwaste.
E. J. Keller Co., Inc., Fairfield City, Alexandria, 242 bls. rags.
E. J. Keller Co., Inc., La Savoie, Havre, 49 bls. bagging.
E. J. Keller Co., Inc., Thuringia, Hamburg, 156 bls. bagging.
E. J. Keller Co., Inc., Thuringia, Hamburg, 52 bls. newcuttings.
E. J. Keller Co., Inc., Patagonier, Antwerp, 91 bls. bagging.
E. J. Keller Co., Inc., Hektor, Marseilles, 78 bls. rags.

OLD ROPE

Brown Bros. & Co., Pittsburgh, Antwerp, 41 coils.
Brown Bros. & Co., Marengo, Hull, 333 coils.
Brown Bros. & Co., Wells City, Bristol, 123 coils.
Brown Bros. & Co., Frederick VIII, Copenhagen, 80 coils.
Brown Bros. & Co., N. Y. City, Bristol, 22 coils.
Castle & Overton, Inc., Caronia, London, 11 bls.

MANILA ROPE

New York Cordage Co., Pittsburgh, Antwerp, 63 coils.
Elermans' Wilson Line, Minnewaska, London, 43 coils.

CASEIN

American Machine & Foundry Co., Collamer, Bordeaux, 133 bags, 10,000 kilos.

CHINA CLAY

J. Lee Smith & Co., Wells City, Bristol, 50 bags.
National City Bank, N. Y. City, Bristol, 535 bags.

WOOD PULP

E. M. Sergeant & Co., Stockholm, Gothenburg, 894 bls. dry soda pulp.
Price & Pierce, Ltd., Stockholm, Gothenburg, 2400 rolls wet pulp.
Johanson, Wales & Sparre, Inc., Topdalsfjord, Sundsvall, 2225 bls. sulphite, 447 tons.
Bulkley, Dunton & Co., Topdalsfjord, Sundsvall, 1000 bls. chemical pulp, 200 tons.
Johanson, Wales & Sparre, Inc., Topdalsfjord, Hernosand, 5250 bls. sulphite, 875 tons.
Johanson, Wales & Sparre, Inc., Topdalsfjord, Hernosand, 600 bls. sulphate, 100 tons.
International Accep. Bank, Als, Rotterdam, 872 bls. woodpulp.
Poland Paper Co., Ida, Trieste, 5345 bls. woodpulp.
Scandinavian Pulp Agency, Inc., Trolleholm, Skutskar, 1000 bls. woodpulp.
Buck Kaier & Co., Frederick VIII, Copenhagen, 600 bls. woodpulp.
The Borregaard Co., Inc., Frederick VIII, Oslo, 300 bls. woodpulp.
J. Anderson & Co., Frederick VIII, Copenhagen, 300 bls. woodpulp.
E. M. Sergeant & Co., Bergensfjord, Oslo, 475 bls. chemical pulp.
Tidewater Paper Mills Co., Sigdal, Weymouth, N. S., 11,203 bls. woodpulp.
M. Gottesman & Co., Inc., Rotterdam, Rotterdam, 669 bls. woodpulp.

WOOD PULP BOARDS

Lagerloef Trading Co., Muenchen, Bremen, 177 bls.
Fibre Case & Novelty Co., Stockholm, Gothenburg, 84 bls.

WOOD FLOUR

S. Burnet, Stockholm, Gothenburg, 3 bags.
B. L. Soberski, Bergensfjord, Frederikstad, 1500 bags.
A. Kramer & Co., Rotterdam, Rottedam, 400 bags.

PHILADELPHIA IMPORTS

WEEK ENDING SEPTEMBER 12, 1925

Standard Products Corp., Pipestone Co., Havre, 15 cs. cigarette paper.
J. W. Hampton Jr. & Co., Pipestone County, Havre, 1 cs. writing paper.
Franklin Paper Co., Eastern Victor, Antwerp, 51 bls. packing paper.
H. Reeve, Angel & Co., Inc., Trolleholm, Norrkoping, 100 rolls newsprint.
Steffens Jones Co., Blommersdyk, Rotterdam, 14 bls. wrapping paper.
S. S. Alcorn, Eastern Dawn, Rotterdam, 22 bls. packing paper.
Considine Co., Eastern Dawn, Rotterdam, 6 bls. paper.
E. J. Keller Co., Inc., Blommersdyk, Rotterdam, 195 bls. rags.
The Stone Bros. Co., Inc., Blommersdyk, Rotterdam, 117 bls rags.
Philadelphia National Bank, Blommersdyk, Rotterdam, 339 bls. rags.
Philadelphia National Bank, Blommersdyk, Rotterdam, 222 bls. bagging.
New York Trust Co., Blommersdyk, Rotterdam, 198 bls. rags.
Union National Bank, Blommersdyk, Rotterdam, 89 bls. rags.
Chase National Bank, Blommersdyk, Rotterdam, 85 bls. rags.
Brown Bros. & Co., Blommersdyk, Rotterdam, 187 bls. rags.
Equitable Trust Co., Blommersdyk, Rotterdam, 144 bls. rags.
Bank of New York, Blommersdyk, Rotterdam, 56 bls. rags.
Second National Bank, Blommersdyk, Rotterdam, 123 bls. rags.
Chemical National Bank, Blommersdyk, Rotterdam, 38 bls. rags.
Manheimer & Co., West Campgaw, Bremen, 57 bls. rags.
G. W. Millar & Co., West Campgaw, Bremen, 39 bls. old rope.
G. W. Millar & Co., West Campgaw, Bremen, 169 bls. cottons.
Castle & Overton, Inc., West Campgaw, Bremen, 97 bls. rags.
Castle & Overton, Inc., West Campgaw, Bremen, 6 bls. newcuttings.
National City Bank, West Campgaw, Hamburg, 154 bls. rags.
E. J. Keller Co., Inc., West Campgaw, Hamburg, 49 bls. rags.
Union National Bank, West Campgaw, Hamburg, 76 bls. rags.
J. B. Moors & Co., West Campgaw, Hamburg, 84 bls. rags.
Philadelphia National Bank, West Campgaw, 408 bls. rags.
Chemical National Bank, West Campgaw, Hamburg, 13 bls. old rope.
Brown Bros. & Co., West Campgaw, Hamburg, 39 bls. rags.
Corn Exchange National Bank, West Campgaw, Hamburg, 12 cs. paper.
Paper Service Co., West Campgaw, Hamburg, 3 cs. paper.
Second National Bank, Hannover, Bremen, 58 bls. rags.
Castle & Overton, Inc., Hannover, Bremen, 314 bls. rags.
Bank of New York, Hannover, Bremen, 123 bls. rags.
E. J. Keller Co., Inc., Hannover, Bremen, 135 bls. rags.
Fidelity International Trust Co., Hannover, Bremen, 103 bls. rags.
Brown Bros. & Co., Hannover, Bremen, 484 bls. rags.
Chase National Bank, Hannover, Bremen, 58 bls. rags.
A. W. Fenton, Inc., Hannover, Bremen, 71 bls. rags.
Equitable Trust Co., Chickasaw, London, 63 bls. wastepaper.
J. B. Moors & Co., Chickasaw, London, 155 bls. rags.
Bank of New York, Daytonian, Hamburg, 193 bls. rags.
A. H. Searle, Daytonian, Hamburg, 2 bls. rags.
Southwark National Bank, Daytonian, Antwerp, 8 bls. rags.
Castle & Overton, Inc., Eastern Victor, Antwerp, 350 bls. rags.
Chase National Bank, Eastern Victor, Antwerp, 573 bls. rags.
A. W. Fenton, Inc., Eastern Victor, Antwerp, 65 bls. rags.
A. Hurst & Co., Eastern Victor, Antwerp, 142 bls. rags.

R. Blank, Eastern Victor, Antwerp, 319 bls. rags.
L. Sher & Sons, Eastern Victor, Antwerp, 18 bls. rags.
Market Street National Bank, Eastern Victor, Antwerp, 274 bls. rags.
Baltimore Trust Co., Eastern Victor, Antwerp, 303 bls. rags.
E. J. Keller Co., Inc., Eastern Victor, Antwerp, 325 bls. rags.
Brown Bros. & Co., Eastern Victor, Antwerp, 450 bls. rags.
National Bank of Commerce, Eastern Victor, Antwerp, 117 bls. rags.
Union National Bank, Eastern Victor, Antwerp, 35 bls. rags.
E. J. Keller Co., Inc., Eastern Victor, Rotterdam, 61 bls. rags.
Philadelphia National Bank, Eastern Victor, Rotterdam, 160 bls. rags.
Castle & Overton, Inc., Eastern Victor, Rotterdam, 81 bls. rags.
Salomon Bros. & Co., Pipestone County, Havre, 227 bls. rags.
Philadelphia National Bank, Pipestone County, Havre, 90 bls. rags.
Equitable Trust Co., Pipestone County, Havre, 275 bls. rags.
The Stone Bros. Co., Inc., Pipestone County, Havre, 224 bls. rags.
D. I. Murphy, Pipestone County, Havre, 301 bls. rags.
D. I. Murphy, Pipestone County, Havre, 33 bls. bagging.
A. W. Fenton, Inc., Pipestone County, Havre, 297 bls. rags.
Salomon Bros. & Co., Pipestone County, Dunkirk, 86 bls. rags.
J. Milton Hagy Waste Works, Pipestone County, Dunkirk, 308 bls. rags.
D. I. Murphy, Pipestone County, Dunkirk, 226 bls. rags.
Castle & Overton, Inc. Pipestone County, Dunkirk, 465 bls. rags.
E. J. Keller Co., Inc., Colamer, Bordeaux, 335 bls. rags.
J. A. Steer & Co., N. Y. City, Bristol, 449 bls. rags.
E. J. Keller Co., Inc., Masaniello, Marseilles, 231 bls. rags.
E. J. Keller Co., Inc., Daytonian, Antwerp, 213 bls rags.
E. J. Keller Co., Inc., Eastern Dawn, Manheim, 103 bls. rags.
D. I. Murphy, Eastern Dawn, Rotterdam, 309 bls. rags.
Reis & Co., Eastern Dawn, Rotterdam, 31 bls. cottonwaste.
Castle & Overton, Inc., Eastern Dawn, Rotterdam, 135 bls. rags.
Castle & Overton, Inc., Eastern Dawn, Antwerp, 93 bls. rags.
A. W. Fenton, Inc., Eastern Dawn, Antwerp, 461 bls. rags.
The Stone Bros. Co., Inc., Eastern Dawn, Antwerp, 42 bls. rags.
Mechanics & Metals National Bank, Eastern Dawn, Antwerp, 331 bls. rags.
D. I. Murphy, Eastern Dawn, Antwerp, 318 bls. rags.
E. J. Keller Co., Inc., Eastern Dawn, Antwerp, 225 bls. rags.
National Bank of Commerce, Eastern Dawn, Antwerp, 146 bls. rags.
Brown Bros. & Co., Eastern Dawn, Antwerp, 80 bls. rags.
Chase National Bank, Eastern Dawn, Antwerp, 154 bls. rags.
J. A. Steer & Co., Eastern Dawn, Rotterdam, 110 bls. old rope.
J. A. Steer & Co., Eastern Dawn, Antwerp, old rope.
J. A. Steer & Co., Jessmore, Leith, 188 bls. old rope.
Philadelphia National Bank, Jessmore, Leith, 88 bls. bagging.
D. M. Hicks, Jessmore, Leith, 129 bls. waste paper.
Castle & Overton, Inc., Delaware, Copenhagen, 21 bls. rags.
Castle & Overton, Inc., Manchester Exchange, Manchester, 64 bls. newcuttings.
Castle & Overton, Inc., Tyne Mary, Hamburg, 282 bls. rags.
Castle & Overton, Inc., Bay State, Scotland, 67 bls. rags.
Castle & Overton, Inc., Cabo Hatteras, Italy, 172 bls. rags.
Castle & Overton, Inc., Fenchurch, Marseilles, 47 bls. rags.
Castle & Overton, Inc., West Eldara, Antwerp, 94 bls. rags.
Castle & Overton, Inc., Fenchurch, Barcelona, 147 bls. rags.
Castle & Overton, Inc., London Mariner, London, 78 bls. rags.
Castle & Overton, Inc., London Mariner, London, 82 coils old rope.
Castle & Overton, Inc., ————, Germany, 1110 bls. wood pulp.
Castle & Overton, Inc., Delaware, Norway, 1500 bls. wood pulp.
Castle & Overton, Inc., West Campgaw, Hamburg, 1085 bls. wood pulp.
Castle & Overton, Inc., Hannover, Bremen, 1710 bls. wood pulp.
Atterbury Bros., Inc., Trolleholm, Sweden, 300 bls. sulphite pulp.

BOSTON IMPORTS

WEEK ENDING SEPTEMBER 12, 1925

G. F. Malcolm, Scythia, Liverpool, 10 cs. tissue paper.
E. J. Keller Co., Inc., West Campgaw, Hamburg, 246 bls. rags.
Baring Bros. & Co., Ltd., Winifredian, Liverpool, 86 bls. rags.
Brown Bros. & Co., Winifredian, Liverpool, 9 bls. rags.
Brown Bros. & Co., Winifredian, Liverpool, 68 bls. old rope.
J. B. Moors & Co., Winifredian, Liverpool, 300 bags hidecuttings.
J. W. Higman & Co., Steinstad, Fowey, 31 tons, 16 cwt. china clay.
Paper Makers Import Co., Steinstad, Fowey, 40 casks, 20 tons.
Atlantic National Bank, Steinstad, Fowey, 90 casks, 45 tons.
Atlantic National Bank, Steinstad, Fowey, 1436 tons, 15 cwt.
Paper Makers Import Co., Steinstad, Fowey, 190 tons, 9 cwt.
J. Richardson, Steinstad, Fowey, 449 tons, 16 cwt.
L. A. Salomon & Bros., Steinstad, Fowey, 26 tons, 15 cwt.
Bulkley, Dunton & Co., Bird City, 1250 bls. wood pulp.
Bulkley, Dunton & Co., Nativar, 1500 bls. wood pulp.
Bulkley, Dunton & Co., Milos, 1750 bls. wood pulp.
Price & Pierce, Ltd., Milos, Wallvik, 3300 bls. sulphite pulp.
J. Anderson & Co., Milos, Hernosand, 3000 bls. sulphite pulp.
J. Anderson & Co., Milos, Hernosand, 1800 bls. sulphate pulp.
Pagel, Horton & Co., Inc., Milos, Hernosand, 1200 bls. sulphite pulp.
Castle & Overton, Inc., ————, Hamburg, 1120 bls. wood pulp.
M. Gottesman & Co., Inc., Bird City, Stockholm, 4550 bls. wood pulp, 924 tons.

NEWPORT NEWS IMPORTS

WEEK ENDING SEPTEMBER 12, 1925

M. Gottesman & Co., Inc., Facto, Canada, 21,000 bls. wood pulp.

BALTIMORE IMPORTS

WEEK ENDING SEPTEMBER 12, 1925

Baltimore Trust Co., Colamer, Bordeaux, 277 bls. rags.
Price & Pierce, Ltd., Topdalsfjord, Wallvik, 5790 bls. sulphite pulp, 965 tons.
Johanson, Wales & Sparre, Inc., Topdalsfjord, Hernosand, 2790 bls. sulphate pulp, 465 tons.
Johanson, Wales & Sparre, Inc., Topdalsfjord, Sundsvall, 2240 bls. sulphite pulp, 415 tons.
M. Gottesman & Co., Inc., Topdalsfjord, Sundsvall, 3000 bls. sulphite pulp, 500 tons.
Price & Pierce, Ltd., Topdalsfjord, Sundsvall, 900 bls. sulphite, 150 tons.
Castle & Overton, Inc., Hannover, Bremen, 1050 bls. wood pulp.
Castle & Overton, Inc., ————, Germany, 275 bls. wood pulp.
M. Gottesman & Co., Inc., Westpool, Trieste, 901 bls. wood pulp.
M. Gottesman & Co., Inc., Nordhval, Stockholm, 2500 bls. wood pulp.
E. J. Keller Co., Inc., Beemsterdyk, Manheim, 255 bls. wood pulp.
E. J. Keller Co., Inc., Idarwald, Hamburg, 96 bls. rag pulp.

NEW ORLEANS IMPORTS

WEEK ENDING SEPTEMBER 12, 1925

Castle & Overton, Inc., Maryland, France, 737 bls. rags.
Castle & Overton, Inc., West Tacook, Germany, 418 bls. rags.
Castle & Overton, Inc., West Hobomac, London, 120 bls. bagging.
Castle & Overton, Inc., Edam, Rotterdam, 126 bls. rags.
Castle & Overton, Inc., Mont Agel, Marseilles, 45 bls. rags.
Castle & Overton, Inc., Maryland, Havre, 543 bls. rags.
E. J. Keller Co., Inc., Maasdam, Rotterdam, 87 bls. bagging.
E. J. Keller Co., Inc., West Chetac, Barcelona, 74 bls. bagging.

GALVESTON IMPORTS

WEEK ENDING SEPTEMBER 12, 1925

E. J. Keller Co., Inc., Nishmaha, Rotterdam, 55 bls. rags.

PORTLAND, ME. IMPORTS

WEEK ENDING SEPTEMBER 12, 1925

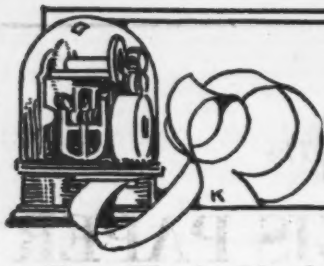
Bulkley, Dunton & Co., West Campgaw, 4825 bls. wood pulp.
Bulkley, Dunton & Co., Portland, Maru, 500 bls. wood pulp.

Cost Association to Convene

The Cost Association of the Paper Industry will hold its annual meeting at the Statler Hotel, Buffalo, on October 22 and 23. Tax Revision in the Paper Industry will be one of the most important subjects discussed; Joseph Albrecht, of Buffalo, is to give an address on this matter. Mr. Albrecht is a well-known expert on tax law, who is retained by the Hammermill Paper Company for their tax work. A representative attendance is anticipated at Buffalo, as officers for the forthcoming year are to be appointed at this meeting, which should prove very eventful.

The Connecticut Valley Local Division of the Cost Association of the Paper Industry, the Wisconsin Division and the Kalamazoo Division, plan to resume their regular meetings in the near future.

Three new members have recently joined the Association, viz., Albemarle Paper Manufacturing Company, of Richmond, Va.; Northwest Paper Company, of Cloquet, Minn.; and Fort Wayne Corrugated Company, of Fort Wayne, Ind.



LATEST MARKET REVIEW

New York Market Review

Office of THE PAPER TRADE JOURNAL,
Wednesday, September 16, 1925.

During the past week, the demand for paper has steadily increased, while prices have remained firm at the recently quoted basis. The general improvement noted in the paper market since the beginning of the month is continuing and the future outlook looks bright. A satisfactory expansion of business is confidently predicted by many members of the paper industry for the balance of the year in almost every grade, and last year's record should easily be exceeded. Sales organizations of the leading paper houses are now in the midst of the usual strenuous and active autumn campaign and are all confident of a highly successful outcome from their efforts.

At the present time, an enormous demand is being experienced for news print and the leading newspapers of the country are all increasing the sizes of their issues materially Due to various reasons, the chief of which is probably the return to the cities of holiday makers, etc., and the approach of the busiest shopping season, circulations are gradually rising. In the metropolitan area alone, the News Print Service Bureau reports that *The New York Times* of Sunday last contained no less than 212 full-size pages, consisting of 13 sections, as follows: News, 32; Editorial, 16; Book Review (32 half-size), 16; Magazine Section (24 half-size), 12; Picture Section (1 and 2), 16; Sport Section, 8; Drama, Music, Schools, Fashion, Screen and Steamships, 18; Special Features and Automobiles, 18; Sports, 8; Radio, 16; Real Estate and Apartments, 28, and Classified Advertisements, 24. The other New York newspapers for last Sunday paged as follows: *Herald-Tribune,* 184 pages, *The World,* 142 pages and *The American,* 120 pages.

Box board continues to improve slightly. Fine papers are doing better and innumerable small orders are coming in from the printers. Coarse papers are also in improved demand and a constant inquiry is being experienced.

Mechanical Pulp

Steady improvement is noticed in the ground wood market. The demand is considered satisfactory, while pulp is still moving freely into the consuming channels. Spot buying shows some signs of improvement but most of the purchasing continues to be on the contract basis. Prices show an inclination to rise and future prospects are generally excellent.

Chemical Pulp

Chemical pulp continues in demand and prices are inclined to advance. Inquiries are gradually growing and a certain liveliness is apparent in the market. In addition to buying for immediate needs, many consumers are now purchasing for a considerable period ahead. Stock is still reported to be moving freely.

Old Rope and Bagging

There is a slightly improved demand for old rope and bagging and the outlook is somewhat brighter than for some time past. Trading, however, is still below normal and prices remain almost stationary.

Rags

The rag market is unchanged and the demand is still rather quiet A change is anticipated in the near future, however, by many close observers. Domestic rags are beginning to attract a little more attention but prices are little changed. The prices on some grades of foreign rags are advancing slowly.

Waste Paper

While the waste paper market is rather quiet, more inquiries are being made for paper stock. Very little business is being transacted, however, and prices remain practically unchanged. At the same time, the board mills are said to be inclined to buy more liberally and some improvement may soon be recorded.

Twine

A most encouraging revival is reported in the twine market and business is better than for some time past. The demand, at present, is most persistent and seems likely to continue. Prices are generally higher and altogether the situation is unusually strong.

Paper Demand Improves in Chicago

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., September 14, 1925.—The past week has shown some improvement in the Chicago paper market. The business world is back at work after an exceptionally hot and hectic summer. The opening of fall activities followed the return of executives and sales organizations to their desks immediately following Labor Day.

This activity was immediately reflected in inquiries and orders for paper and paper products. Chicago distributors of fine papers, bonds and ledgers, report a small but noticeable increase in business and further state that their salesmen have found a much healthier attitude on the part of buyers. Printers are coming through with ream orders and there does not exist the demand for broken packages that has been prevalent all summer. Stationery stores had fully equipped themselves for the opening of the new school year, which saw the largest enrollment of pupils in Chicago's public and private schools. These supplies met with a ready market and in the near future these stationery and school supply houses will again be in the market.

The regular stationery houses, most of which are located in the Loop, are displaying in their windows and featuring on their shelves, business forms, loose leaf devices, filing systems and a miscellaneous assortment of paper products necessary in office use.

Publication printers state that prospects for larger editions with increased number of copies per edition are exceptionally bright. In like manner, newspapers are expected to soon show the result of renewed interest in publicity and advertising campaigns.

The demand for coarse papers continues good. Summer and vacation specialties, however, are being shelved for another season. Paper containers, cups, napkins, etc., have had an unusual run this summer. To partly compensate manufacturers and distributors for the loss in this line of business is an attractive increase in the use of paper towels and drinking cups in offices and factories. Wrappings, tissues and similar products are moving nicely.

Ciba Co. Succeeds Dyes Distributing Co.

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., September 14, 1925.—The Dyes Distributing Company has been discontinued. The Ciba Company, Inc., has taken over the office and organization at 227-233 West Huron street. The company manufactures dyestuffs, intermediates and chemicals. C. B. Smith represents the paper mill section of the sales department.

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Miscellaneous Markets

Office of THE PAPER TRADE JOURNAL,
Wednesday, September 16, 1925.

Conditions in the chemical market are steadily improving and the outlook for future trading appears thoroughly healthy. Contract buying continues particularly good and withdrawals are normal, while deliveries are well maintained. There is very little spot buying, however, at the present time, customers still being over-cautious, but this situation will undoubtedly change within the next few weeks, as future requirements will have to be taken care of. Manufacturers are expected to announce their revised prices late this month, or early in October. Some of the commodities are thought to be on the slate for an advance and concessions may be made on others, but, on the whole, prices will probably not be changed very radically from the present level.

BLANC FIXE.—The demand for blanc fixe is well maintained. Reserve stocks of many consumers are low and, in consequence, buyers are coming into the market with orders which bulk up very well. The pulp is quoted at from $60 to $70 a ton and the powder at from $75 to $90 a ton.

BLEACHING POWDER.—A satisfactory demand is being experienced for bleaching powder and enquiries are increasing since the beginning of the month. Consumers stocks are generally low and, as a result, many of them are forced to replenish their supplies. It is being quoted at present from 1.90 to 2.10 cents a pound.

CAUSTIC SODA.—Caustic Soda is still forging ahead. Contract business remains satisfactory and spot buying, which has been exceedingly slow, is beginning to pick-up. There is no deviation from the quoted price of 3.10 to 3.15 cents a pound.

CASEIN.—Casein is going ahead nicely. The demand is quite active and prices are firmly maintained. The quoted price remains unchanged at 13 cents a pound.

CHINA CLAY.—China Clay has been gradually gaining since the beginning of the month and is a steady influence on the clay market. A lively demand is anticipated from now on until the end of the year. Imported goods are quoted at from $16 to $20 a ton, while the domestic grades are selling at from $12 to $15 a ton.

CHLORINE.—A steady and persistent demand is now being experienced for chlorine. For this month's delivery, considerable business has already been transacted, and future prospects are excellent. The present quotation is from 4 to 4½ cents per pound in tanks, at works.

ROSIN.—There is an exceptionally good demand for rosin and the tone of the market is strong. Supplies in the southern sections are small, although receipts show an increase. Prices are tending upwards. The naval stores centers are quoting it at $13.60 in barrels of 280 pounds.

SALT CAKE.—The salt cake market is unsettled and prices are inclined to fluctuate. However, orders of greater volume are coming in than for some time past and the general outlook is satisfactory. The quoted price for salt cake is from $20 to $22 a ton in bulk, at works.

SODA ASH.—Some improvement has developed in the Soda Ash market. Contract withdrawals are more frequent and deliveries are approaching normalcy. Inquiries for small lots are expanding greatly. Not much price shading is in evidence at present. The quoted price remains at around 1.35 cents a pound in bulk, at works.

SULPHATE OF ALUMINA.—A promising future is anticipated for Sulphate of Alumina. The demand is quite active and the market appears to be ripe for a change. Commercial grades are quoted at from 1.40 to 1.45 cents a pound at the Eastern Works, while the iron free is selling at from 2 to 2.05 cents a pound.

SULPHUR.—The market for sulphur is quite strong. Buying has improved and contract withdrawals are consistent and according to schedule. The quoted price is unchanged at from $19 to $20 a ton in bulk, ship side, and $15 to $16 a ton, at mine.

TALC.—Talc shows some signs of improvement, although a pronounced change is not anticipated for some time. The quoted price remains at from $17 to 18 a ton.

Customs Decisions at New York on Paper

Sustaining a claim of Albert Roberts, the Customs Board finds that certain boxes, memorandum pads, blotting pads, etc., assessed with duty at 35 per cent ad valorem under Paragraph 1313, 1922 Act, as "manufactures of paper, or of which paper is the component material of chief value, not specially provided for" should have been taxed, as claimed in the protest, at but 5c per pound and 20 per cent ad valorem under Paragraph 1305, Act of 1922, as articles composed in chief value of surface-decorated papers.

Denying relief to the Montreal Lithographing Company, Ltd., Detroit, Judge Fischer holds that certain sheets of paper, lithographically printed, and intended for use as covers for books, were correctly taxed with duty at 25c per pound under Paragraph 1306, Act of 1922, as lithographic prints not exceeding eight one-thousandths of an inch in thickness. Claim was made for duty at only 8c per pound under the same paragraph as "fashion magazines or periodicals, printed in whole or in part by lithographic process, or decorated by hand," but this claim is overruled by the Customs Board.

Reversing the decision of the collector, the Board of Appraisers finds that certain printing paper used by druggists in making printed labels to be attached to bottles was improperly assessed with duty under Paragraph 1309, 1922 Act, at 30 per cent ad valorem as paper not specially provided for. The importer claimed duty at ¼c per pound and 10 per cent ad valorem under the provision in Paragraph 1301 for "printing paper, not specially provided for," and this claim is granted by the board.

Relief is denied to the Henry Heil Chemical Company, St. Louis, in an opinion by Judge Fischer of the Customs Board. According to the record the merchandise involved, described by the appraiser as "extraction shells made of filter paper," was taxed with duty at 35 per cent ad valorem under Paragraph 1313, Act of 1922, as manufactures of paper not specially provided for. In overruling the protestants' claim for duty at 5c per pound and 15 per cent ad valorem under Paragraph 1309 as "filtering paper" the General Appraiser holds that, there being no specific provision in the Act of 1922 for manufactures of filtering paper, duty was properly taken under Paragraph 1313.

Collins Mfg. Co. Gets Case Transferred

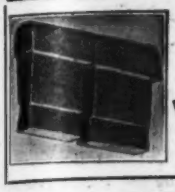
[FROM OUR REGULAR CORRESPONDENT]

SPRINGFIELD, Mass., September 14, 1925.—The case brought by the Collins Manufacturing Company, of North Wilbraham, against the Wickwire Spencer Steel Company, of Palmer, has been transferred by Judge John D. McLaughlin of the Superior Court to the United States District Court, certain features of the case making it advisable.

The paper company brought a bill in equity against the Palmer concern for $200,000 damages from dumping iron waste and other iron substances, compounds and derivatives into the Quaboag river. The Quaboag is one of three rivers that form the Chicopee river from which the paper concern at North Wilbraham gets its power. It is alleged by the paper company that this iron in the water affects the manufacture of paper and the paper company further seeks to have the defendant company enjoined from dumping this stuff in the river.

Chas. B. Botsford & Co. to Dissolve

BOSTON, Mass., September 3, 1925.—The firm of C. B. Botsford & Co., general paper merchants 127-29 Kingston Street, Boston, composed of Charles H. Botsford and Frank G. Morse, will be dissolved by mutual consent October 1, 1925.



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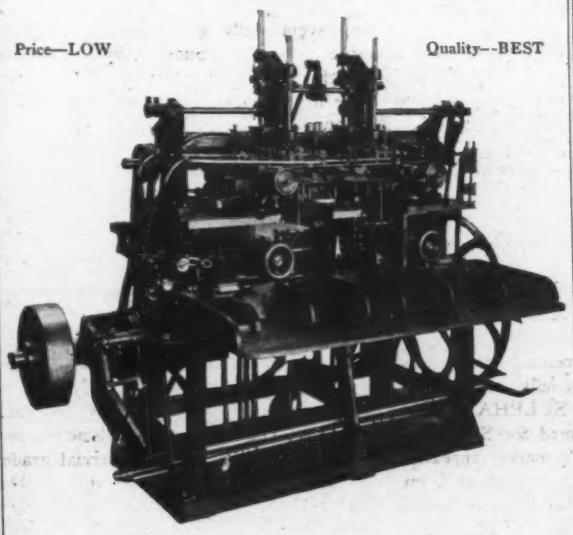

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Market Quotations

Quoted by Hepburn & Co., No. 74 Broadway, N. Y. City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	OFFERED
Abitibi Power and Paper, Gen. 6s 1940	101	103*
Advance Bag and Paper, 7s 1943	98	100*
Bastrop Pulp and Paper, 7½s 1932	104	108*
Brompton Pulp and Paper, 6s 1927	94	96
Beaver Board, 8s 1933	92	94
Bedford Pulp and Paper, 6½s 1942	98	...
Berkshire Hills Paper Co., 8s 1941	...	80
Beaver Board, N. Y. Curb, 8s 1933	93	95
Beaver Products Corp., 7½s 1942	104	106
Belgo Canadian Paper, 6s 1943	100	101
Brown Paper Co., 8s 1931	102	...
Berlin Mills, 5s 1931	98	...
Bryant Paper Co., 6s 1942	99	102*
Brown Company Serial, 6s 1925-43	97	100
Central Paper 6½s 1925-42	91	94
Cape Breton Pulp and Paper, 6s 1932	100	...
Carthage Sulphite Pulp and Paper, 8s 1941	40	50
Champion Coated Paper Co., 6s 1924-34	...	102
Champion Fibre Co. Notes, 8s 1930	101	...
Cherry River Paper, 5s 1929	98	100*
Donnaconna Paper Co., Ltd., 6s 1940	99	101
Eddy Paper, 7½s 1931	97	...
Eagle Paper, 6½s 1932	96	100
Escanaba Paper, 6s 1933	87	95*
Fox River Paper, 7s 1931	100	...
Fort Orange Paper Co., 7s 1942	95	99
Eddy Paper Co., 7½s 1931	95	...
Gilbert Paper Co., 7s 1927	96	...
Gilbert Paper Co., 6½s 1923-29	101	102*
Hammermill Paper Co., 6s 1930-39	99	...
Hercules Corp'n, 8s 1936	100	...
Hummell, Ross Fibre Corp., 7s 1925	90	...
Jessup & Moore Paper Co., 6s 1939	90	97
Kenmore Pulp and Paper Co., 6s 1937	90	...
Lake Superior Pulp and Paper, 6s 1941	105	...
Mattagami Pulp and Paper, 6s 1937	90	...
Marinette & Menominee, 7½s 1936	104	...
National Paper and Type, 6s 1947	96	99*
Oswego Falls Corp., 8s 1942	102	105
Orono Pulp and Paper, 5s 1941	93	96*
Orono Pulp and Paper, 6s 1943	97	100*
Oxford Paper Co., 6s 1947	101	...
Paterson Parchment Paper, 5½s 1927-28	98	100
Paterson Parchment, 6s 1938	98	100
Parker Young Co., 6½s 1944	92	96
Price Bros. & Co. Ltd., 6s 1943	100	102
Provincial Paper Mills, Ltd., 6s 1940	97	...
Riordon Co., Series A, 8s 1940	115	118
Riordan Paper, 6s 1924	95	...
Riordan Pulp and Paper, Ltd., 6s, 1929	33	35
River Raisin Paper, 8s 1936	104	106
St. Maurice Paper Co., Ltd., 5½s, 1929	98½	99¼
St. Regis Paper, 6½s, 1929-35	97	102
Smith (Howard) Paper Mills, 7s 1941	98	100
Smith (Howard) Paper Mills, 6s 1934	98	...
St. Croix Paper, 5s 1923-37	95	...
Stevens & Thomson Paper, 6s 1942	88	92
Spanish River Pulp and Paper, 6s 1931	105	108
Spanish River Pulp and Paper, Gen 8s 1941	106	109
Ticonderoga Pulp and Paper Co., 6s, 1940	91	95
Ticonderoga Pulp & Paper 1-5, 1930	88	93
S. D. Warren Company, 6s, 1945	97	100
Whittaker Paper, 1st 7s 1942	96	98
Watab Paper Co., 6½s 1942	100	104
Waterway Paper Products, 7s 1924-27	95	100
Wayagamack Pulp and Paper, Ltd., 6s 1951	87	90

STOCKS	BID	ASKED
Abitibi Power and Paper, Com	65	68
Abitibi Power and Paper, Pfd.	104	...
Advance Bag and Paper, Com	8	12*
Advance Bag and Paper, Pfd.	77	...
Beaver Board, Com.	4	6
Beaver Board, Pfd.	32	35
Bryant Paper, Cap.	12	...
Bryant Paper, Pfd.	9	...
Chicago Mill & Lumber Co., Com.	63	...
Chicago Mill & Lumber Co., Pfd.	98	104
Crown Williamette, Com.	93	98*
Crown Williamette, 7% A, Pfd.	98	SW
Donnaconna Paper, Com.	42	48
Donnaconna Paper, Pfd.	93	98*
Great Northern Paper, Cap.	260	270
Jessup & Moore Paper, Pfd.	75	80
International Paper Co., Com.	65	68
International Paper Co., Pfd. 6%	75	80
Mengel Company, Com.	67	70
Mengel Company, Pfd.	83	93
Oxford Papers, Com.	93	97
Oxford Paper Co., Pfd.	98	...
Provincial Paper Co., Com.	94	98
Provincial Paper Co., Pfd.	99	...
Price Brothers, Cap.	39	40
St. Croix Paper	185	215
St. Maurice Paper Co., Cap.	82	85
St. Regis Paper Co., Cap.	54	56
Spanish River Pulp and Paper, Com.	104	105
Spanish River Pulp and Paper, Pfd.	115	117
Ticonderoga Pulp and Paper, Can.	145	...
West Virginia Pulp and Paper, Cap.	44	47
West Virginia Pulp and Paper, Pfd.	95	100
Whittaker Paper, Com.	25	35
Whittaker Paper, Pfd.	60	70

* Nominal.

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub Sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—		
Rolls, contract	3.50	@ 3.90
Rolls, transit	3.75	@ 4.25
Sheets	4.00	@ 4.25
Side Runs	3.50	@ 4.00
Book, Cased—		
S. & S. C.	7.00	@ 9.75
M. F.	6.25	@ 8.75
Coated and Enamel	8.00	@15.00
Lithograph	8.00	@15.00
Tissues—Per Ream		
White No. 1	.70	@ .90
Anti-Tarnish	1.10	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.65	@ .75
Kraft	.85	@ .95
Manila	.70	@ .80
Kraft—		
No. 1 Domestic	5.75	@ 6.25
No. 2 Domestic	5.10	@ 5.50
Imported	5.50	@ 5.75
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	4.50	@ 5.00
No. 2 Fibre	4.25	@ 4.75
Common Bogus	2.50	@ 2.75
S. Screening	3.00	@ 3.50
Card Middles	4.00	@ 5.00
Boards—per ton—		
News	45.00	@47.50
Straw	57.00	@60.00
Chip	42.00	@45.00
Binders' Boards	72.50	@77.50
Sgl. Mla. Ll. Chip	58.00	@60.00
Wood Pulp	70.00	@75.00
Container	62.50	@67.50
Sulphate Screenings—		
Coarse	.75	@ .85
Refined	1.75	@ 2.00
Ground Wood—		
Screenings	20.00	@25.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

Mechanical Pulp

(Ex-Dock)

No. 1 Imported	33.00	@37.00

(F. o. b. Mill)

No. 1 Domestic	28.00	@32.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	4.00	@ 4.50
Easy Bleaching	3.10	@ 3.40
No. 1 strong unbleached	2.90	@ 3.25
No. 2 strong unbleached	2.55	@ 2.85
No. 1 Kraft	2.95	@ 3.15
Sulphate—		
Bleached	3.65	@ 3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.85	@ 4.50
Easy Bleaching Sulphite	3.00	@ 3.25
News Sulphite	2.55	@ 2.80
Mitscherlich	3.25	@ 3.75
Kraft (Domestic)	2.75	@ 3.25
Soda Bleached	4.00	@ 4.25

Domestic Rags

New Rags

Prices to Mill f. o. b. N. Y.

Shirt Cuttings—		
New White, No. 1	14.25	@15.00
New White, No. 2	8.00	@10.00
Silesias No. 1	10.50	@11.50
New Unbleached	14.00	@15.00
Washables	6.50	@ 9.25
Fancy	9.75	@10.25
Blue Overall	10.00	@11.00
New Blue Prints	7.50	@ 8.50
New Soft Blacks	5.75	@ 6.20
Mixed Khaki Cuttings	7.00	@ 8.00
Pink Corset Cuttings	10.25	@10.75
Pink Muslin	10.00	@10.50
New Light Seconds	3.25	@ 3.50
O. D. Khaki Cuttings	7.00	@ 8.00
Men's Corduroy	6.25	@ 6.75
New Mixed Blacks	4.00	@ 4.50

Old Rags

White, No. 1—		
Repacked	6.50	@ 7.50
Miscellaneous	6.50	@ 7.00
White, No. 2—		
Repacked	4.25	@ 4.50
Miscellaneous	3.75	@ 4.25
St. Soiled, White	3.00	@ 3.50
Thirds and Blues—		
Repacked	4.00	@ 4.25
Miscellaneous	3.25	@ 3.50
Black Stockings	3.75	@ 4.25
Roofing Rags—		
Cloth Strippings	2.50	@ 2.75
No. 1	2.40	@ 2.50
No. 2	2.40	@ 2.50
No. 3	2.25	@ 2.50
No. 4	2.30	@ 2.40
No. 5A	1.50	@ 1.75

Foreign Rags

New Light Silesias	10.00	@11.00
Light Flannelettes	11.00	@12.00
Unbleached Cottons	14.00	@15.50
New White Cuttings	14.00	@15.00
New Light Oxfords	10.00	@11.00
New Light Prints	9.00	@10.00
New Mixed Cuttings	4.25	@ 4.50
New Dark Cuttings	4.25	@ 4.75
No. 1 White Linens	10.00	@11.00
No. 2 White Linens	7.25	@ 8.25
No. 3 White Linens	6.25	@ 6.75
No. 4 White Linens	4.50	@ 5.50
Old Extra Light Prints	4.25	@ 4.75
Ord. Light Prints	3.50	@ 4.00
Med. Light Prints	3.00	@ 3.50
Dutch Blue Cottons	4.00	@ 4.50
Ger. Blue Cottons	3.25	@ 3.75
Ger. Blue Linens	4.25	@ 4.75
Checks and Blues	3.25	@ 3.50
Linsay Garments	2.50	@ 2.60
Dark Cottons	2.35	@ 2.45
Shoppery	2.25	@ 2.35
French Blues	4.00	@ 4.50

Bagging

Prices to Mill F. o. b. N. Y.

Gunny No. 1—		
Foreign	3.15	@ 3.25
Domestic	3.15	@ 3.25
Wool Tares, light	2.50	@ 2.60
Wool, Tares, heavy	2.60	@ 2.70
Bright, Bagging	2.55	@ 2.65
Mixed Bagging	2.30	@ 2.40
Sound Bagging	2.10	@ 2.20
Roofing Bagging	2.00	@ 2.10
Manila Rope—		
Foreign	5.65	@ 6.00
Domestic	6.50	@ 7.00
New Bu. Cut	3.60	@ 3.85
Hessian Jute Threads—		
Foreign	4.00	@ 4.25
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, White, No. 1	3.50	@ 3.70
Hard, White, No. 2	3.25	@ 3.50
Soft, White, No. 1	2.80	@ 2.90
Flat Stock—		
Stitchless	1.45	@ 1.55
Overissue Mag	1.25	@ 1.40
Solid Flat Book	1.25	@ 1.40
Crumpled No. 1	1.25	@ 1.35
Solid Book Ledger	1.70	@ 1.80
Ledger Stock	1.40	@ 1.50
New B. B. Chips	.65	@ .75
Manilas—		
New Env. Cut	2.25	@ 2.40
New Cut. No. 1	1.85	@ 2.25
Extra No. 1 old	1.40	@ 1.50
Print	1.20	@ 1.30
Container Board	.70	@ .90
Bogus Wrapper	1.00	@ 1.10
Old Krafts Machine compressed bales	2.00	@ 2.10
News—		
No. 1 White News	1.85	@ 2.00
Strictly Overissue	1.05	@ 1.15
Strictly Folded	.75	@ .85
No. 1 Mixed Paper	.65	@ .70
Common Paper	.50	@ .55

Twines

Cotton—(F. o. b. Mill)—		
No. 1	.42	@ .45
No. 2	.41	@ .43
No. 3	.40	@ .42
India, No. 6 basis—		
Light	.19	@ .20
Dark	.17	@ .19
B. C., 18 basis	.39	@ .41
A. B. Italian, 18 Basis	.56	@ .61

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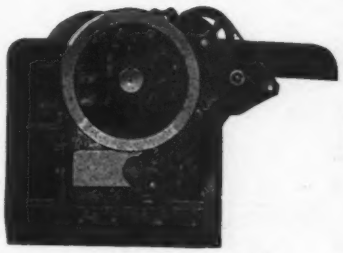

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Finished Jute—			
Dark, 18 basis...	.30	@	.31
Light, 18 basis..	.28	@	.30
Jute Wrapping, 3-6 Ply—			
No. 1	.21	@	.23
No. 2	.21	@	.23
Tube Rope—			
4-ply and larger..	.15½	@	.17½
Fine Tube Yarn—			
5-ply and larger..	.20	@	.28
4-ply	.21	@	.24
3-ply	.22	@	.25
Unfinished India—			
Basis	.14½	@	.15½
Paper Makers' Twine			
Balls	.12	@	.13
Box Twine, 2-3 ply	.14	@	.15
Jute Rope	.20	@	.40
Ameri. Hemp, 6...	.30	@	.32
Sisal Hay Rope—			
No. 1 Basis	.14	@	.16
No. 2 Basis.....	.10	@	.12
Sisal Lath Yarn—			
No. 1	.14	@	.15
No. 2	.11	@	.13
Manila Rope	.18	@	.19

CHICAGO

Paper

F. o. b. Mill			
All Rag Bond.....	35	@	40
No. 1 Rag Bond...	25	@	35
No. 2 Rag Bond...	14	@	25
Water Marked Sulphite	9	@	12
Sulphite Bond.....	7	@	10¾
Sulphite Ledger....	9	@	12
Superfine Writing..	18	@	24
No. 1 Fine Writing	14	@	18
No. 2 Fine Writing	12	@	14
No. 3 Fine Writing	9	@	12
No. 1 M. F. Book.	5½	@	7½
No. 1 S. & S. C. Book	6	@	7¾
Coated Book.....	7½	@	10
Coated Label.....	7½	@	10
News—Roll, mill...	3½	@	4¼
News—Sheets, mill	3¾	@	4¾
No. 1 Manila.....	4½	@	5½
No. 1 Fibre.....	4½	@	5
No. 2 Manila.....	4	@	4½
Butchers' Manila..	3¾	@	4¼
No. 1 Kraft.....	6	@	6½
No. 2 Kraft (Southern Grade).....	4	@	4½
No. 2 Kraft (Northern Grade).....	5	@	5¼
Wood Tag Boards.	4¼	@	6¼
Sulphite Screenings	3	@	3¼
Manila Tissue, 24x36 sheet	7¼	@	7¾
White Tissue, 20x30 sheet	7¼	@	7½
Boards, per ton—			
(Delivered Central Territory)			
Plain Chip 45.00		@	47.50
Solid News.....47.50		@	50.00
Manila Line Chip.57.50		@	60.00
Container Lined—			
(Delivered Central Territory)			
85 Test	—	@	75.00
100 Test	—	@	80.00

Old Papers

F. o. b. Chicago

Shavings—			
No. 1 Hard White	3.25	@	3.50
White Envel. Cuttings	3.15	@	3.25
No. 1 Soft Shav.	2.90	@	3.10
No. 1 Mixed....	1.45	@	1.50
No. 2 Mixed....	1.15	@	1.20
Ledger and Writings	1.55	@	1.60
Solid Books	1.45	@	1.50
No. 1 Light Books	1.00	@	1.05
Blanks	2.00	@	2.10
Kraft	2.25	@	2.35
New Kraft Cuts.	2.50	@	2.60
Manila Envelope Cuttings	2.50	@	2.60
Ex. No. 1 Manila..	2.25	@	2.35
Print Manila	1.05	@	1.10
Folded News (oversize)	.90	@	.95
Old Newspapers—			
No. 1	.80	@	.85
No. 2	.65	@	.70
Mixed Papers—			
No. 1	.75	@	.80
No. 2	.55	@	.60
Straw Clippings....	.75	@	.80
Binders' Clippings..	.75	@	.80
Roofing Stocks, f. o. b. Chicago, Net Cash—			
No. 1.....47.00		@	52.00
No. 2.....45.00		@	50.00
No. 3 .....43.00		@	48.00
No. 4.....41.00		@	46.00

BOSTON

Paper

Ledgers—			
Sulphite	.08½	@	.18
Rag content	.18	@	.36½
All Rag	.38	@	.50
Bonds—			
Sulphite	.07½	@	.10½
Rag Content.....	.17	@	.45
All Rag	.36½	@	.51
Writings	.08	@	.20
Superfines	.22	@	.50
News	.04	@	.04½
Book, Super	.08	@	.10
Book, Coated	.09	@	.14
Coated Litho.....	.09½	@	.15
Label	.09½	@	.15
Jute Manila No. 1.	.11	@	.12
Manila, Sul. No. 1.	.05	@	.05
Manila, Sul. No. 2.	.03¾	@	.04¼
No. 1 Kraft.....	.05¾	@	.06½
No. 2 Kraft.....	.05¼	@	.05½
Common Bogus....	.02½	@	.02¾
Straw Board	—	@	50.00
News Board	—	@	50.00
Chip Board	—	@	47.50
Single Manila Pulp lined board 57.50		@	60.00
Single White, patent coated board 75.00		@	82.50
Wood Pulp Board..80.00		@	85.00
Binder Boards.....75.00		@	85.00
Tarred Felts—			
Regular 61.00		@	63.00
Slaters 66.00		@	68.00
Best Tarred, 1 Ply, roll	1.50	@	1.60
Best Tarred, 2 Ply, roll	1.70	@	1.80
Best Tarred, 3 Ply, roll	2.00	@	2.10

Old Papers

Shavings—			
No. 1 Hard White	4.00	@	3.75
White Blank News	1.75	@	2.00
Manila Env. Cuttings	2.80	@	3.00
No. 2 Hard White	3.25	@	3.50
No. 1 Soft White..	.02¼	@	.03
No. 2 Soft White..	.02½	@	.03
No. 1 Mixed.....	1.60	@	1.75
No. 2 Mixed.....	1.25	@	1.50
Solid Ledger Stock	2.00	@	1.75
No. 1 Books, Heavy	1.25	@	—
No. 1 Books, Light	—	@	1.25
No. 1 New Manila.	2.50	@	2.60
No. 1 Old Manila.	1.75	@	2.00
Print Manila	1.05	@	1.20
Old Kraft	2.25	@	—
Overissue News	1.00	@	—
Old Newspapers	.70	@	—
No. 1 Mixed Paper	.60	@	.47½
Box Board, Chip..	.60	@	.50

Bagging

Price f. o. b. Boston

Gunny No. 1—			
Foreign	—	@	3.00
Domestic	—	@	3.00
Manila Rope	6.00	@	6.50
Mixed Rope	2.00	@	—
Scrap burlaps	—	@	2.37½
Wool Tares, heavy.	2.50	@	2.75
Mixed Strings...	—	@	1.90
New Burlap Cuttings	—	@	3.75

Domestic Rags (New)

Price f. o. b. Boston

Shirt Cuttings—			
New White No. 1	.15½	@	.15
Silesias, No. 1...	.11	@	—
New Unbleached.	.14¼	@	.15
Washable	.07¾	@	.08
Fancy	.10½	@	—
Cottons—According to Grades—Blue—			
Blue overalls.....	12½	@	—
New Black, soft...	.07	@	—
Khaki Cuttings.....	.07	@	—
Corduroy	.04	@	.05
New Canvas	.12	@	.12½

Domestic Rags (Old)

Price f. o. b. Boston

White No. 1 .....10.00		@	—
Repacked	9.50	@	—
Miscellaneous	8.50	@	—
White No. 2—			
Repacked	6.50	@	—
Miscellaneous.....	5.25	@	—
Thirds and Blues—			
Repacked	5.00	@	—
Miscellaneous ...	3.50	@	—
Roofing Stock—			
No. 1	2.75	@	—
No. 2	2.50	@	—
No. 3	1.90	@	—
No. 4	2.00	@	—

PHILADELPHIA

Paper

Bonds	.07	@	.40
Ledgers	.11	@	.40
Writings—			
Superfine	.13	@	.18
Extra fine	—	@	.22
Fine	.20	@	.26½
Fine, No. 2.....	.16	@	.25
Fine, No. 3.....	.12	@	.20
Book, M. F.....	.06¾	@	.07
Book, S. S. & C...	.06	@	.07½
Book, Coated	.11	@	.16
Coated Lithograph.	.09	@	.12
Label	.09	@	.12
News	.03¾	@	.04
No. 1 Jute Manila.	.09½	@	—
Manila Sul., No. 1	.04½	@	.06
Manila No. 2.....	.04	@	.04½
No. 2 Kraft.....	.05¼	@	.05¾
No. 1 Kraft.....	.06¼	@	.06½
Common Bogus	.02¾	@	—
Straw Board 56.00		@	55.00
News Board 47.50			
Chip Board 50.00			
Wood Pulp Board. (Carload Lots)	4.50	@	5.00
Binder Boards—			
Per ton 75.00		@	80.00
Carload lots 65.00		@	70.00
Tarred Felts—			
Regular 66.00		&68.00	
Slaters 70.00		@	72.00
Best Tarred, 1-ply (per roll)	1.85	@	1.95
Best Tarred, 2-ply (per roll)	1.55	@	1.70
Best Tarred, 3-ply.	2.10	@	2.15

Bagging

F. o. b. Phila.

Gunny, No. 1—			
Foreign	3.00	@	3.25
Domestic	3.00	@	3.25
Manila Rope	4.75	@	6.00
Sisal Rope	2.50	@	—
Mixed Rope	1.00	@	1.25
Scrap Burlaps...	2.25	@	2.50
Wool Tares, heavy.	2.00	@	2.13
Mixed Strings...	1.25	@	—
No. 1, New Lt. Burlap	3.50	@	3.75
New Burlap Cuttings	3.25	@	3.50

Old Papers

F. o. b. Phila.

Shavings—			
No. 1 Hard White	3.50	@	3.60
No. 2 Hard White	3.00	@	3.25
No. 1 Soft White	2.60	@	2.70
No. 2 Soft White	2.00	@	2.20
No. 1 Mixed.....	1.50	@	1.60
No. 2 Mixed.....	1.00	@	1.10
Solid Ledger Stock.	1.75	@	1.90
Writing Paper	1.60	@	1.80
No. 1 Books, heavy	1.30	@	1.40
No. 2 Books, light.	1.20	@	1.25
No. 1 New Manila.	1.80	@	2.00
No. 1 Old Manila..	1.60	@	1.75
Print Manila.....	1.25	@	1.35
Container Manila..	1.00	@	1.10
Old Kraft	2.00	@	2.10
Over issue News...	1.00	@	1.10
Old Newspapers....	.70	@	.75
No. 1 Mixed Paper	.65	@	.70
Common Paper....	.50	@	.60
Straw Board, Chip.	.60	@	.65
Binders Bd., Chip..	.60	@	.65

Domestic Rags—New

Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.13½	@	.14
New White, No. 2	.06	@	.08
Silesias, No. 1...	.10½	@	.11
New Unbleached.	.14	@	.14½
Washable	.07¼	@	.07¾
Fancy	.09½	@	.10
Cottons—according to grades—			
Blue Overall.....	.11	@	.11½
New Blue.....	.04	@	.04¾
New Black Soft..	.06	@	.06¾
New Light Seconds	.03½	@	.03¾
Khaki Cuttings..	.06½	@	.07
Corduroy	.04	@	.04½
New Canvas	.08¾	@	.09
New Black Mixed	.05	@	.05½

Old

White, No. 1—			
Repacked	6.75	@	7.00
Miscellaneous ...	6.25	@	6.50
White, No. 2—			
Repacked	.05	@	.05¼
Miscellaneous ...	.04¾	@	.05
Thirds and Blues—			
Repacked	3.75	@	4.00
Miscellaneous ...	3.15	@	3.25
Black Stockings.	4.25	@	4.50
Roofing Stock—			
No. 1	2.00	@	2.15
No. 2	1.90	@	2.00
No. 3	1.25	@	1.35
No. 4	1.10	@	1.20
No. 5A	1.10	@	1.15
B	1.05	@	1.10
C	1.00	@	1.05

TORONTO

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.10½	@	.12½
Light tinted	.11	@	.13½
Dark tinted	.12½	@	.15
Ledgers (sulphite).	—	@	.13
Ledgers No. 1.....	.36	@	—
Ledgers No. 2.....	.27	@	—
Writing	.09½	@	
Writing S. C.	.10	@	
News f. o. b. Mills—			
Rolls (carloads)..	3.50	@	—
Sheets (carloads).	—	@	4.25
Sheets (2 tons or over)	—	@	4.60
Book—			
No. 1 M. F. (carloads)	8.00	@	—
No. 2 M. F. (carloads)	7.50	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.50	@	—
No. 2 S. C. (carloads)	8.00	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Coated tinted	.15	@	—
Wrapping—			
Rag Brown	4.75	@	—
White Rag	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manilla ...	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.....	7.00	@	—
M. G.	7.15	@	—

Pulp

(F. o. b. Mill)

Ground wood.....29.00		@	30.00
Sulphite easy bleaching 60.00		@	65.00
Sulphite news grade 55.00		@	58.00
Sulphite, bleached. 75.00		@	80.00
Sulphate 62.50		@	65.00

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. cut..	3.60	@	—
Soft White Book shavings	—	@	3.10
White Blk. News	1.70	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.25	@	—
Light and Crumpled Book Stock	1.10	@	—
Ledgers and Writings	1.40	@	—
Solid Ledgers ...	1.40	@	—
Manilas—			
New Manila Cut.	—	@	1.60
Printed Manilas..	1.00	@	—
Kraft	2.10	@	2.10
News and Scrap—			
Strictly Overissue	.80	@	—
Folded News.....	.80	@	—
No. 1 Mixed Papers	.55	@	—

Domestic Rags—

Price to mills, f. o. b. Toronto

	Per lb.		
No. 1 White shirt cuttings	.14½	@	.14¾
No. 2 White shirt cuttings	.08	@	.08½
Fancy shirt cuttings	.09¾	@	.10
No. 1 Old Whites..	—	@	—
Third and blues...	—		—